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*catalog 1961-1962*


# UNITED STATES AIR FORCE ACADEMY



MAN'S FLIGHT  
THROUGH LIFE IS  
SUSTAINED BY THE  
POWER OF HIS  
KNOWLEDGE

PRESENTED BY MEMBERS  
OF THE  
AIR TRAINING COMMAND  
1954





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# CATALOG

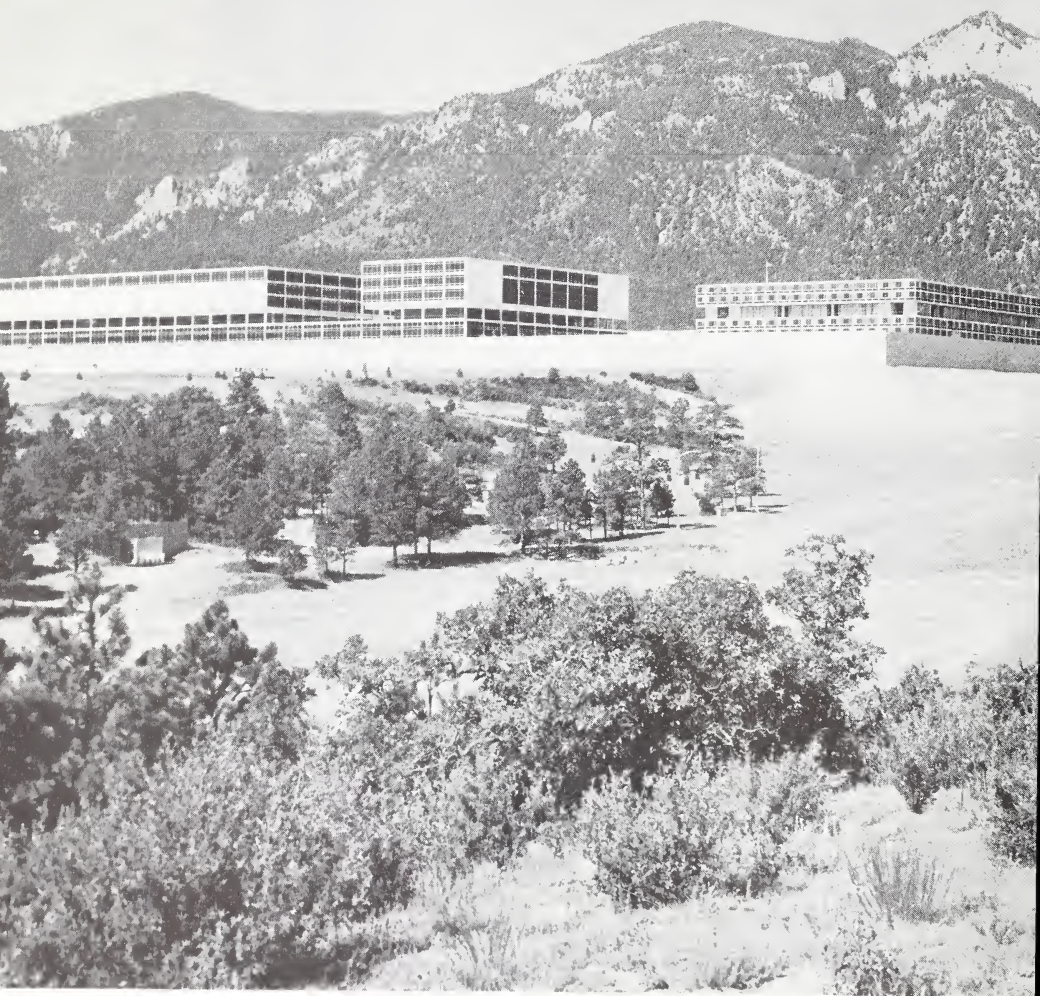
*number 6  
may 1961*

# ANNUAL





# Contents



*This catalog should not be considered a contract between the United States Air Force Academy and any prospective candidate. The curriculum and policies are subject to change to meet varying requirements of the Air Force.*



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# Important Dates

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1 June 1961 - 31 January 1962	<i>Application and Nomination Period</i>
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December 1961 - March 1962	<i>Air Force Testing</i>
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3 March 1962	<i>College Board Tests (Regular Date)</i>
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24 March 1962	<i>College Board Tests (Make-up Date)</i>
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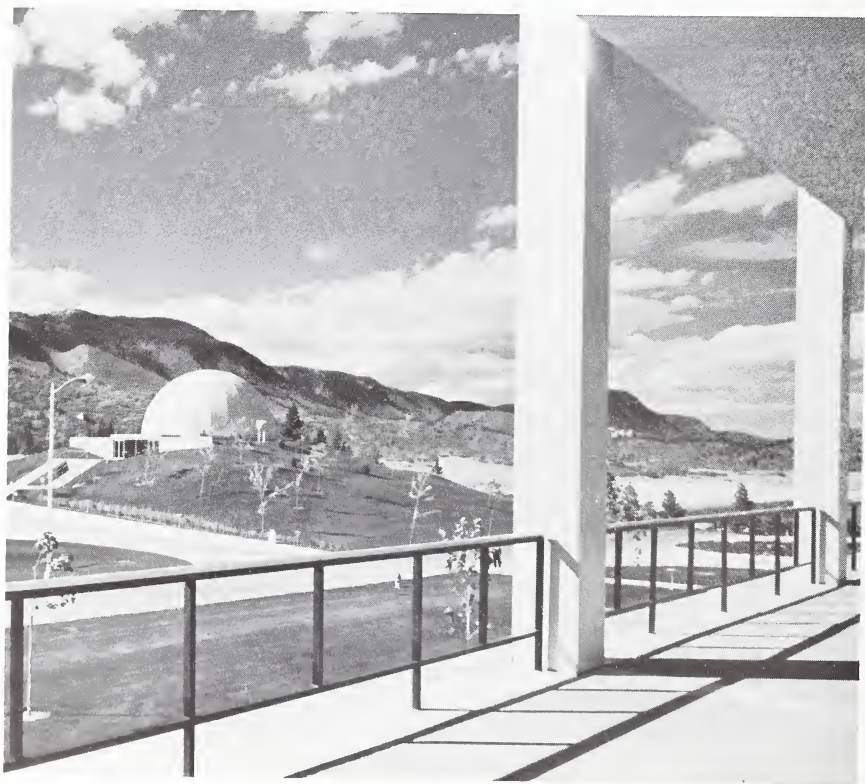
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Mid-May 1962	<i>Cadet Class Selected</i>
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25 June 1962	<i>Cadet Class Enters</i>
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# Calendar 1961-1962

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8 Jun 61, Thursday	<i>Summer Term Begins</i>
26 Jun 61, Monday	<i>Class of 1965 Enters</i>
4 Jul 61, Tuesday	<i>Holiday, Independence Day</i>
16 Aug 61, Wednesday	<i>Summer Term Ends</i>
21 Aug 61, Monday	<i>Fall Semester Begins</i>
4 Sep 61, Monday	<i>Holiday, Labor Day</i>
11 Nov 61, Saturday	<i>Holiday, Veterans' Day</i>
23 Nov 61, Thursday	<i>Holiday, Thanksgiving Day</i>
21 Dec 61, Thursday	<i>Fall Semester Ends; Christmas Leave Begins</i>
4 Jan 62, Thursday	<i>Christmas Leave Ends; Spring Semester Begins</i>
22 Feb 62, Thursday	<i>Holiday, Washington's Birthday</i>
5 May 62, Saturday	<i>Spring Semester Ends</i>
7 May 62, Monday	<i>May Term Begins</i>
30 May 62, Wednesday	<i>Holiday, Memorial Day</i>
2 Jun 62, Saturday	<i>May Term Ends; June Week Begins</i>
6 Jun 62, Wednesday	<i>June Week Ends; Graduation Day, Class of 1962</i>
7 Jun 62, Thursday	<i>Summer Term Begins</i>
25 Jun 62, Monday	<i>Class of 1966 Enters</i>

# Board of Visitors

## *Appointed by the President of the United States*

<b>Lt. Gen. Bryant L. Boatner</b> USAF Retired	<i>Administrator of Engineering Eaton Manufacturing Co. Cleveland, Ohio</i>
<b>Mr. James H. Douglas</b>	<i>Attorney (former Secretary of the Air Force)</i>
<b>Dr. Frederick L. Hovde</b>	<i>President of Purdue University La Fayette, Ill.</i>
<b>Mr. Harold Taft King</b>	<i>Attorney, Denver, Colo.</i>
<b>Gen. Edwin W. Rawlings</b> USAF Retired	<i>Finance Vice President, General Mills, Minneapolis, Minn.</i>
<b>Dr. Robert L. Stearns</b>	<i>President of Boettcher Foundation Denver, Colo.</i>

## *Appointed by the Vice President of the United States*

<b>Sen. Howard W. Cannon</b>	<i>Nevada</i>
<b>Sen. A. S. Mike Monroney</b>	<i>Oklahoma</i>
<b>Sen. Milton R. Young</b>	<i>North Dakota</i>

## *Appointed by the Speaker of the House*

<b>Rep. J. Edgar Chenoweth</b>	<i>Colorado</i>
<b>Rep. Don Magnuson</b>	<i>Washington</i>
<b>Rep. Harold C. Ostertag</b>	<i>New York</i>
<b>Rep. Byron G. Rogers</b>	<i>Colorado</i>

## *Ex-officio Members of the Board*

Chairman of the Armed Services Committee of the Senate	
<b>Sen. Richard B. Russell</b>	<i>Georgia</i>
<i>Represented by</i>	
<b>Sen. Robert C. Byrd</b>	<i>West Virginia</i>
Chairman of the Armed Services Committee of the House	
<b>Rep. Carl Vinson</b>	<i>Georgia</i>
<i>Represented by</i>	
<b>Rep. Jeffery Cohelan</b>	<i>California</i>

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A Board of Visitors is established by law to inspect the curriculum, instruction, and facilities of the Academy each year.



# Officers of Administration

Superintendent	<b>Maj. Gen. William S. Stone</b>
Commandant of Cadets	<b>Brig. Gen. William T. Seawell</b>
Dean of the Faculty	<b>Brig. Gen. Robert F. McDermott</b>
Director of Athletics	<b>Col. M. L. Martin</b>
Chief of Staff	<b>Col. Howard J. Withycombe</b>
Staff Chaplain	<b>Col. Stephen J. O'Connor</b>
Registrar	<b>Col. Virgil J. O'Connor</b>

## *The Academy Board*

Superintendent, *President of the Board*

Commandant of Cadets

Dean of the Faculty

Director of Athletics

Chairman, Basic Sciences Division

Chairman, Applied Sciences Division

Chairman, Humanities Division

Chairman, Social Sciences Division

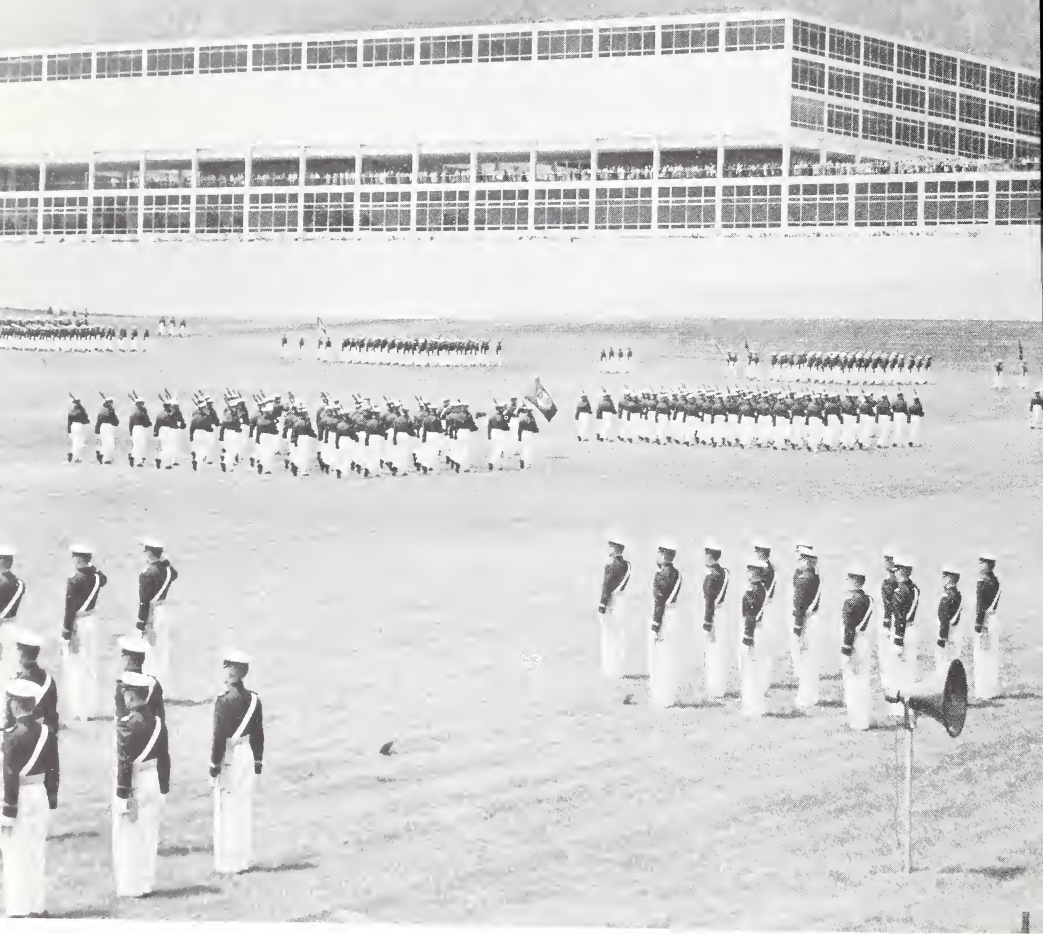
Deputy Commandant of Cadets

Wing Air Officer Commanding

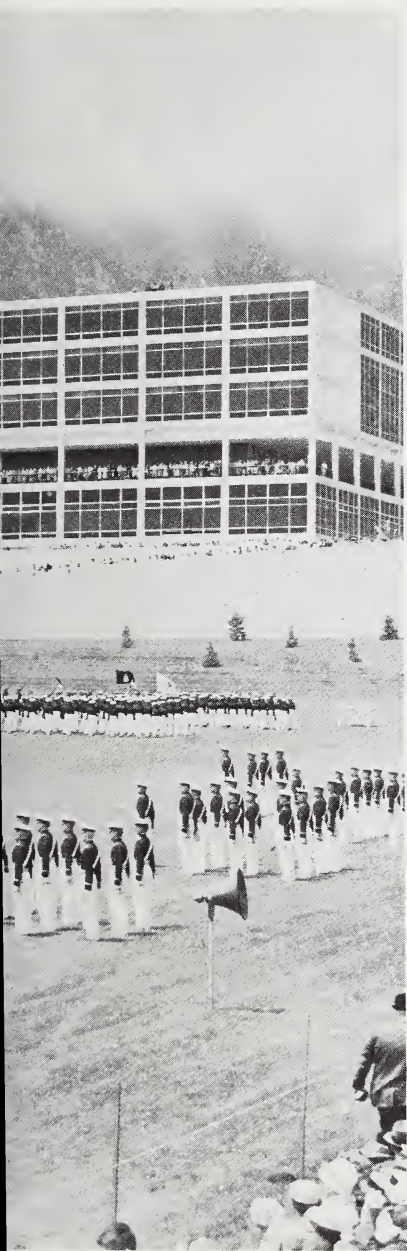
Chief of Staff, *Secretary*

Registrar, *Assistant Secretary*

# Mission







**The Air Force Academy provides instruction, experience, and motivation to each cadet so that he will graduate with the knowledge, character, and qualities of leadership essential to his progressive development as a career officer in the United States Air Force.**

## OBJECTIVES

The four-year curriculum of the Air Force Academy is composed of the Academic Program, the Airmanship Program, and the Athletic Program. Successful completion of the curriculum entitles the cadet to graduate with a Bachelor of Science degree and a Regular commission as a second lieutenant.

### *The Academic Program*

Provides general courses in liberal arts, science, and engineering studies which furnish a foundation for future development in any of the numerous career fields open to Air Force officers.

Provides elective courses to meet the needs of the individual cadet in developing his full academic potential.

Motivates the cadet for continued educational development after graduation by self-instruction and attendance at graduate schools.

Prepares the cadet to fulfill his intellectual duties as a citizen and a dedicated public servant in the Air Force.

### *The Airmanship Program*

Develops in the cadet the moral character and qualities of leadership desired in an Air Force officer.

Instills in the cadet a deep founded belief in national defense, pride in the Air Force, and inspiration to give his best in a lifetime of service to his country.

Equips the cadet with fundamental military knowledge and skills required of a junior officer, and provides him with the professional military education for continued development leading to the highest command and staff positions.

Motivates the cadet toward a career in the aerospace age and provides a foundation for future specialization in manned and unmanned aerospace systems.

### *Athletic Program*

Develops desirable traits of character such as persistence, desire-to-win, and aggressiveness which are essential to leadership.

Develops those qualities needed to perform physical tasks without undue strain.

Develops a positive attitude toward physical fitness.

Promotes the *esprit de corps* of the Cadet Wing through health competition and pride in an outstanding athletic program.



## HISTORY

A separate service academy to prepare outstanding young men of the nation for military leadership in air defense had been the dream of American airmen since World War I. This dream was realized at last when President Eisenhower signed legislation establishing the Air Force Academy on 1 April 1954.

The first major step toward creation of the Air Force Academy was taken in January 1949, when the first Secretary of Defense James Forrestal appointed a service academy board to determine among other matters the need for a third service academy. The chairman of this board was Dr. Robert L. Stearns, then President of the University of Colorado, and the vice chairman was General Dwight D. Eisenhower, then President of Columbia University. The Board found that the needs of the Air Force could not be met by any desirable expansion of the existing service academies and recommended that an Air Force Academy be established without delay. It was not until 1954, at the close of the Korean conflict, that Congress authorized establishment of the Academy.

The effort to choose a site for the Academy began immediately. Harold E. Talbott, then Secretary of the Air Force, appointed a site selection committee, composed of prominent civilian and military leaders, who screened some 400 locations and visited proposed sites in 22 states. On 24 June 1954, Secretary Talbott announced that the site eight miles north of Colorado Springs would be the permanent home of the Air Force Academy. Lowry Air Force Base in Denver was named as the temporary site of the Academy until construction of the permanent Academy was completed.

General Hubert R. Harmon, who had been a member of the site selection committee, came back to active duty from retirement at the personal request of President Eisenhower to become the first Superintendent of the Air Force Academy. Under his direction a program of education, with the flexibility to meet rapidly changing developments of the aerospace age, was carefully designed and perfected. The basic fundamentals and the newest findings of science were blended with the social sciences and the humanities to form a balanced program of education for future Air Force officers.

On 11 July 1955, in ceremonies at Lowry Air Force Base, the nation dedicated its first new service academy in more than a century.

At these ceremonies the first class of 306 cadets was sworn in. While a curriculum, a tradition, and a way of life were being formed at Lowry, one of the greatest community building projects in the nation's history went into operation at the permanent site some sixty miles away. The Academy builders moved at a fast pace on this prodigious project. They were asked to have the cadet buildings ready for occupancy by the time the first class reached its final year — and the goal was met.

On 29 August 1958, the cadets began to move into their new quarters in the shadow of the Rampart Range. Unfortunately, neither General Harmon nor Air Force Secretary Talbott lived to see that day. Their deaths came close together early in 1957. General Harmon's body was interred at the Academy shortly after the first cadets moved in.

Maj. Gen. James E. Briggs had succeeded General Harmon in August 1956 when he retired because of his health. Following graduation of the first class in June 1959, General Briggs was succeeded by Maj. Gen. William S. Stone.

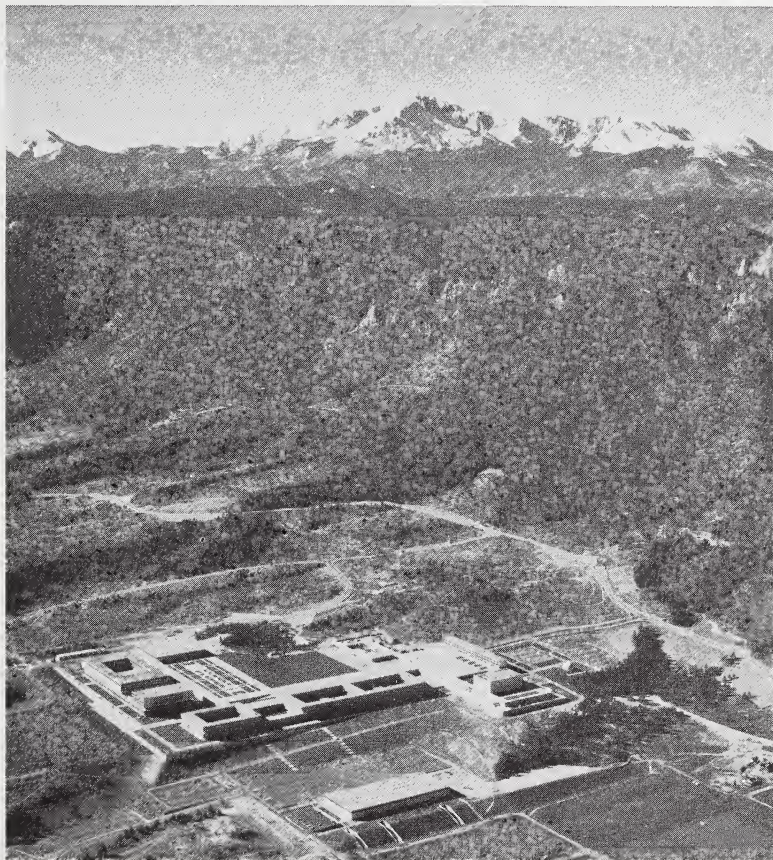
Within a short time the new Air Force Academy has taken on a look of permanency. The main complex where the cadets live and attend classes is complete, with the exception of the cadet chapel which is being constructed. Included in this complex are the cadet dining hall, academic building and library, applied sciences laboratory, administration building, cadet social center, planetarium, gymnasium, parade and drill field, and athletic fields. The buildings are designed in contemporary architectural style, featuring glass, aluminum, steel, and white marble.

Housing areas for officers and airmen, a community center, and a hospital are other principal building projects which have been constructed at the Academy. A football stadium, financed by donations, is now under construction midway between the north and south areas of the site.

The Academy site stretches for 17,900 acres, with 10,000 suitable for construction. This expanse of land has allowed for an airfield and further plant expansion if Congress should so order. The topography of the site is a series of fingerlike mesas with valleys in between, backed to the west by the Rampart Range of the Rocky Mountains and overlooking the plains to the east. The altitude ranges from 6,235 to 7,100 feet within the boundaries of the site.

Two hundred and seven cadets, comprising the Class of 1959, were the first to graduate from the Air Force Academy. They received their commissions and diplomas in the theater of the cadet social center on 3 June 1959. During June Week ceremonies honoring the graduating cadets, the Academy's main buildings were named for famous Air Force leaders. The buildings are Vandenberg Hall (the cadet dormitory), Harmon Hall (the administration building), Mitchell Hall (the dining hall), Fairchild Hall (the academic building), and Arnold Hall (the cadet social center).

The Academy is now admitting full-size classes of approximately 800 cadets in June of each year. The Cadet Wing will build up to a stabilized strength of approximately 2,500 cadets in 1962.

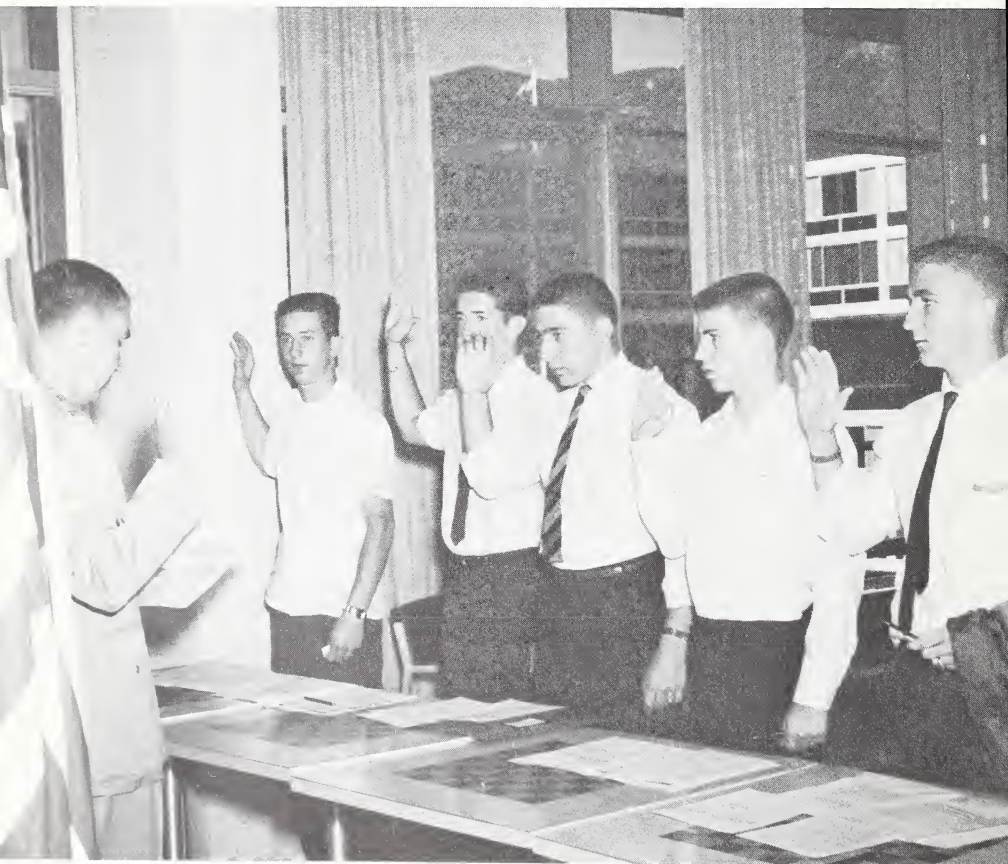




# Admissions

*Prospective candidates or other interested persons who desire additional copies of this catalog or have questions not answered by this information should write to:*

Registrar  
United States Air Force Academy  
Colorado



## ELIGIBILITY REQUIREMENTS

To be eligible for a cadet appointment to the class entering the Academy on 25 June 1962, a young man must meet the following basic requirements:

### **Age**

He must be at least 17 and not have passed his 22nd birthday on 1 July 1962.

### **Citizenship**

He must be a male citizen of the United States.

### **Character**

He must have good moral character.

### **Marital Status**

He must be unmarried and never have been married. (Any cadet who marries will be discharged from the Academy.)

### **Medical Standards**

He must be in good physical condition.

He must have all dental defects corrected.

He must have at least 20/100 vision, correctable to 20/20 with moderate refractive error limitations.

He must be at least 5 feet 4 inches and not more than 6 feet 6 inches tall with weight in normal relation to height.

## APPLICATION PROCEDURES

### **Nomination Requirements**

A young man who desires an appointment to the Air Force Academy must first apply for and obtain a nomination in at least one of the following categories:

*Congressional* — Open to residents of the 50 states.

*District of Columbia and Possessions* — Open to residents of the District of Columbia, the Canal Zone, and the Commonwealth of Puerto Rico.

*Presidential* — Open to sons of active, retired or deceased members of the Regular components of the armed forces.

*Members of the Regular and Reserve Components of the Air Force and Army.*

*Sons of Deceased Veterans.*

*Honor Graduates of Honor Military and Naval Preparatory Schools.*

*Sons of Congressional Medal of Honor Winners.*

These categories are described thoroughly in this chapter under the section entitled *Nominating Categories*. All of the nominating sources are established by law, and no one can take the entrance examinations and be considered for an appointment to the Academy unless officially nominated as a candidate.

An applicant should study the nominating categories to determine what kind or kinds of nomination he is eligible to seek. Since specific cadet vacancies are allocated to each nominating category, an applicant may improve his chances of selection by applying in all the categories for which he is eligible. Only one series of entrance examinations is required for candidates entered in more than one nominating category.

### ***Previous Candidates***

A candidate in a previous year who failed to receive an appointment may become a candidate again by obtaining a nomination from one of the appropriate authorities. Previous candidates will receive special instructions regarding entrance examinations and forms to be submitted. The status of previous candidates may vary considerably, but generally they will not be required to accomplish everything required of new candidates.

### ***How to Apply***

There are no special application forms issued to prospective candidates, and the Academy should not be contacted to furnish such forms. A regular business type letter is all that is required to apply for most nominations. Exceptions are Regular and Reserve component applicants who must complete the standard form available from their unit commanders. Sample letters for requesting a nomination in Congressional, Presidential, and Sons of Deceased Veterans categories appear in the appendix of this catalog.

The *Nominating Categories* section contains instructions on how to apply in each category. An applicant should give all the information requested to establish that he is qualified in the category for which he is applying. He should address the application to the proper authority to insure that it is received without delay.

### ***Documentary Evidence***

When applying for a nomination, an applicant should use the name which appears on his birth certificate. If he should desire to



use a different name on his records, he will be required as a candidate to provide evidence of appropriate authority for the name change. For minor name changes, such as correcting misspelled names or the addition or deletion of a middle name, a notarized statement from parents indicating that the two names identify the same person will be sufficient. For major name changes, such as a different first or last name, a copy of the court order or decree authorizing the change will be required.

### ***When to Apply***

Applications should be made approximately a year in advance of admission. For example, a young man who desires to enter the Academy upon graduation from high school should apply at the close of his junior year. If he obtains an appointment, he will enter in June following graduation.

Each Member of Congress may submit the names of eleven young men as nominees to the Air Force Academy. They are permitted to submit nominations to the Academy any time between 1 June and 31 January for the class entering the following June. A majority of the Senators and Representatives make their nominations early in this period. For that reason, it is important to apply for a Congressional nomination as near 1 June as possible. A young man who waits until the fall or winter months to apply will not be considered if his Congressman has already selected his quota of nominees.

Most of the Senators and Representatives require their applicants to take a Civil Service examination as a measure of general knowledge. Ordinarily the examination is given to applicants in July and November. The Academy does not administer the Civil Service examination and does not advise prospective candidates on how to prepare for it. Any request for information regarding this examination should be directed to the Member of Congress. A majority of the Congressmen also require their applicants to take a preliminary examination, which is explained in this chapter under *Examinations*.

### ***Assistance from Liaison Officers***

A group of Air Force Reserve officers not on active duty, who are located in communities throughout the United States, act in an

official capacity as Liaison Officers for the Air Force Academy. Representatives of the Air National Guard, Reserve Officer Training Corps, and Civil Air Patrol also serve as Liaison Officers within their organizations. It is the duty of a Liaison Officer to provide information to young men and their parents concerning admissions procedures and cadet life. A prospective candidate who desires to talk with the Liaison Officer nearest to him may obtain his name and address by writing to the Registrar, United States Air Force Academy, Colorado. All official candidates will receive a list of Liaison Officers along with instructions pertaining to the entrance examinations.

## **NOMINATING METHODS**

### ***Congressional***

Each United States Senator and Representative will have one cadet vacancy to fill in each entering class. The Member of Congress may choose between two methods of nomination as follows:

#### ***1. Principal-Alternate Method***

He may nominate one principal candidate and ten alternate candidates listed in order of his preference. If the principal candidate qualifies on the entrance examinations, he will be offered the appointment. If the principal does not pass the examinations, the first alternate candidate who qualifies will be chosen.

#### ***2. Competitive Method***

He may nominate eleven candidates and authorize the Air Force Academy to select his best qualified candidate. A composite score will be determined for each of the eleven candidates who qualifies on the entrance examinations. The composite score will include all entrance examination scores, previous academic achievement, scores for extra-curricular activities, and a rating based upon the recommendations of school principals and teachers. The candidate with the highest composite score will be offered the appointment.

### ***Other Categories***

The choice between the principal-alternate method and the competitive method is also available to the following nominating authorities: the Resident Commissioner of Puerto Rico, the Governor of the Canal Zone, and the Commissioners of the District of Columbia.

Candidates will be selected for appointment on a competitive basis from nominees entered in the following categories: Presidential, Sons of Deceased Veterans, Regular and Reserve Components, and Honor Military and Naval Schools. Nominees chosen to fill extra appointments allocated to Qualified Alternate Candidates will also be selected competitively. Factors considered in the competition are all entrance examination scores, previous academic achievement, extra-curricular activities, and recommendations of school principals and teachers.

The Son of a Congressional Medal of Honor Winner will be nominated upon application to the Academy. He will be offered an appointment, provided he qualifies on the entrance examinations.

## **NOMINATING CATEGORIES**

### ***Congressional***

A total of 537 cadet vacancies will be filled from nominees of Members of Congress. Each Senator and Representative may nominate eleven candidates. Any resident of the 50 states who meets the Academy eligibility requirements may apply for a Congressional nomination. The applicant must make his request directly to a United States Senator from his state or to a United States Representative from his Congressional district. A sample letter of application is included in the appendix of this catalog for guidance to the applicant.

### ***District of Columbia***

Two vacancies are reserved for the District of Columbia. The Commissioners of the District of Columbia may nominate eleven candidates for each of the two vacancies. A letter requesting nomination from a Commissioner should contain the same information required of Congressional applicants.

### ***The Canal Zone and the Commonwealth of Puerto Rico***

One vacancy is allotted to Puerto Rico and one to the Canal Zone. Residents of the Canal Zone may apply to the Governor of the Canal Zone, and residents of Puerto Rico may apply to the Resident Commissioner. A letter of application to one of these nominating authorities should contain the same information required of Congressional applicants.

### ***Presidential***

Twenty-two vacancies are allocated to the President of the United States, who in turn has reserved these vacancies for sons of members



of the Regular components of the armed services (Air Force, Army, Navy, Marine Corps, and Coast Guard). The eligibility requirements specify that the Regular component member must still be in the service on active duty, retired, or deceased, but not discharged before retirement. The son of a member of the Reserve component is not eligible in this category, unless his parent received a Reserve commission or warrant while on enlisted status in the Regular component and retained the right to revert to Regular enlisted status.

In order for an adopted son to qualify as a Presidential candidate, he must have been legally adopted before his fifteenth birthday or proceedings must have been started before that time.

To request a nomination in this category, an applicant (not his parent) must write to the Director of Admissions, United States Air Force Academy, Colorado. A sample letter of application is included in the appendix of the catalog.

There are no limits on the number of candidates who may compete in the Presidential category. If it is determined that an applicant meets the eligibility requirements, he will be confirmed as a candidate in this competition.

### ***Sons of Deceased Veterans***

Ten vacancies are reserved for sons of deceased veterans who were killed in action or died of wounds, injuries, or disease incurred in active service during World War I, World War II (7 December 1941 thru 31 December 1946), or the Korean conflict (27 June 1950 thru 31 January 1955).

To request a nomination in this category, an applicant must write to the Director of Admissions, United States Air Force Academy, Colorado. A sample letter of application is included in the appendix of the catalog.

There are no limits on the number of candidates who may compete in the Sons of Deceased Veterans category. If it is determined that an applicant meets the eligibility requirements, he will be confirmed as a candidate in this competition.

### ***Regular Components***

Twenty-two vacancies are reserved for enlisted members of the Regular Air Force and the Regular Army. Candidates must have completed one full year of active Regular service by 1 July of the year admitted to the Academy. A candidate must be an active mem-

ber of the Regular component when appointed to the Academy, but his year of required service time does not have to be continuous.

A joint Air Force-Army regulation (AFR 53-10, AR 350-58, "Appointment to the United States Air Force Academy") gives complete directions for making application in this category. A prospective candidate must apply through his unit commander, who will process his application and forward it to the Director of Admissions for a determination of eligibility. The application form (DD Form 786) should be obtained through normal publications supply channels at the military organization where the individual is assigned.

### ***Reserve Components***

Twenty-three vacancies are allotted for enlisted members of the Reserve components of the Air Force and the Army (Air Force Reserve, Army Reserve, Air National Guard, and Army National Guard). Candidates must have completed one full year of Reserve service by 1 July of the year admitted to the Academy. A candidate must be an active member of the Reserve component when appointed to the Academy, but his year of required service time does not have to be continuous.

A joint Air Force-Army regulation (AFR 53-10, AR 350-58, "Appointment to the United States Air Force Academy") gives complete directions for making application in this category. A prospective candidate must apply through his unit commander, who will process his application and forward it to the Director of Admissions for a determination of eligibility. The application form (DD Form 786) should be obtained through normal publications supply channels at the military organization where the individual is assigned.

### ***Honor Military and Naval Preparatory Schools***

Ten vacancies are reserved for honor graduates of honor military and naval preparatory schools. The Departments of Air Force, Army, and Navy determine annually which secondary schools will be designated as honor schools. Each school may nominate three candidates from its honor graduates or prospective honor graduates to compete for the cadet vacancies. The schools must submit their nominations to the Director of Admissions, United States Air Force Academy, Colorado, before 31 January 1962.

Each nomination must contain a certification by the head of the institution that the candidate was an honor graduate or is a pros-

pective honor graduate during a year that the institution was designated an honor school.

### ***Sons of Congressional Medal of Honor Winners***

The son of a Congressional Medal of Honor winner who served in any branch of the armed services may apply for a nomination in this category. If an applicant meets the eligibility criteria and qualifies on the entrance examinations, he will be admitted to the Academy. Vacancies are not limited in this category.

An applicant must write to the Director of Admissions, the United States Air Force Academy, Colorado, requesting a nomination in this category. The letter must include the following:

1. Full name, address, and date of birth.
2. Rank, service number, organization, and station, if a member of the military service.
3. Full name, rank, service number, and branch of service of the parent to whom the Medal of Honor was awarded.

### ***Qualified Alternate Candidates***

In each entering class, the Air Force Academy Board may recommend qualified alternate candidates for appointment in whatever number may be necessary to bring the Cadet Wing to its authorized strength. It is anticipated that more than 170 vacancies will be filled from qualified alternate candidates in the class entering in June 1962. Only those qualified alternates named by Members of Congress and the Resident Commissioner of Puerto Rico will be considered. Not more than one qualified alternate nominated by any one authority may be appointed each year.

Thus a young man nominated by one of those authorities, but not appointed to fill his vacancy, will still be considered for the Academy if he qualifies on the entrance examinations. All qualified alternate candidates will be considered and no application by the individual is necessary.

### ***Foreign Students***

The Air Force Academy will begin to admit young men from certain foreign countries in 1963. Quotas will be allocated to the Republic of the Philippines, the American Republics, and Canada. Citizens of other foreign countries may be admitted only through specific authorization of the United States Congress.



## EXAMINATIONS

### *Preliminary Medical Examination*

Preliminary medical examinations may be given to Air Force Academy applicants at Army, Navy, and Air Force installations. Applicants are advised to select an Air Force installation if possible. A preliminary medical is desirable for these reasons:

1. The examination might reveal a physical defect which could be corrected in time to qualify on the Air Force Academy Qualifying Medical Examination. Examples of remediable defects are carious teeth, hernia, and active pilonidal cyst.

2. The examination might show that an applicant is definitely physically disqualified. Knowing this in advance would save him the time of taking the final medical examination, while his early withdrawal might enable another applicant to receive a nomination. A list of the most common disqualifying defects is included in the catalog appendix.

In order to take a preliminary medical at a military installation, an applicant must first obtain a letter of authorization. Before deciding on their nominations, many Members of Congress send letters of authorization to their prospective nominees requiring that they take the medical. An applicant who does not receive an authorization may request it by writing to his Senator or Representative. An applicant from the District of Columbia or from an area outside of the United States should contact his nominating authority.

Applicants in the Regular or Reserve component categories will be required to take a preliminary medical and will receive authorization from their unit commanders. Applicants in the other service-connected categories will also be required to take a preliminary medical and will receive authorization from the Director of Admissions when their candidate eligibility has been determined.

An applicant is advised to take the examination at the nearest military installation, preferably an Air Force facility, and to arrange for an appointment in advance by contacting the surgeon's office at the installation hospital. The Air Force Academy and Aircrew Examining Centers listed in the appendix of this catalog constitute a partial list of Air Force facilities available to the applicant.

A preliminary medical examination is for the information and guidance of the candidate and his nominating authority only. The

examination results do not obligate the Department of the Air Force to accept a candidate if later he is found to have a disqualifying physical defect on the final medical examination.

### ***Air Force Examinations***

A candidate will be scheduled to take the Air Force Academy Qualifying Medical Examination and the Physical Aptitude Examination at the Air Force Academy and Aircrew Examining Center nearest to him.

The Director of Admissions will send an authorization letter to the candidate specifying the time and place to report for these examinations. If the candidate cannot report at the time specified, he may request a change in the testing date. The request should be submitted at least three weeks prior to the scheduled testing date, unless special circumstances are involved which make this impossible. In his request the candidate should specify his first and second choices of preferable testing dates. Tests will be scheduled on 11 December 1961, and in 1962 on 15 and 29 January; 12, 19, and 26 February; and 5, 12, and 19 March.

Approximately two days are required to complete the tests. Travel expenses must be paid by the candidate, unless he is a member of the armed services on active duty. Meals and living accommodations while at the examining center will be provided at a nominal cost to the candidate.

*The Air Force Academy Qualifying Medical Examination* measures a candidate's physical fitness for admission to the Academy.

Each candidate is advised to have all dental defects corrected prior to taking the medical examination. All decayed teeth revealed by visual or x-ray examination must be filled. The teeth in each arch, except third molars, must be serviceably opposed by functional natural teeth or by artificial teeth, serviceable bridges, or partial dentures. Orthodontic appliances, except retainers, must be removed in order to qualify.

A candidate must be in good physical condition with none of the disqualifying defects listed in the appendix of this catalog. He must have at least 20/100 vision, correctable to 20/20 with moderate refractive error limitations. He must be at least 5 feet 4 inches and not more than 6 feet 6 inches tall with weight in normal relation to height.

*The Physical Aptitude Examination* includes a series of physical aptitude exercises designed to measure strength, coordination, endurance, speed, and agility. A list of specific test items is included in the catalog appendix.

### ***College Entrance Examination Board Tests***

A candidate will be required to take the following College Entrance Examination Board Tests:

#### Scholastic Aptitude Test

1. Verbal Section
2. Mathematics Section

#### Achievement Tests

1. Intermediate Mathematics or Advanced Mathematics (optional choice)
2. English Composition
3. Any one additional achievement test of the candidate's choice. (It may be the Writing Sample or any other test offered by the College Board.)

A bulletin of information, *College Board Tests*, will be sent to the candidate by the Director of Admissions. The bulletin includes a test registration card which must be forwarded by the candidate directly to the College Entrance Examination Board. The Board publishes descriptive booklets entitled *A Description of the College Board Scholastic Aptitude Test* and *A Description of the College Board Achievement Tests*. Most secondary schools have a supply of these booklets. If a candidate is unable to obtain copies at his school, he may write to the nearest College Board office and request that the booklets be sent to him. (See next footnote for address.) There is no charge for the booklets. They describe all tests given during the current school year.

The College Entrance Examination Board will schedule the candidate to take the tests at a College Board center which the candidate chooses from a list included in the bulletin of information. The center may be located within the candidate's community or usually not more than 75 miles from his home.

The regular testing date for Air Force Academy candidates is 3 March 1962. If circumstances arise which make it impossible for a candidate to take the test on 3 March, he may submit a request to



be scheduled for the tests on the make-up date of 24 March. A letter containing his reason for requesting the make-up date should be addressed to the Director of Admissions, United States Air Force Academy, Colorado. The request should be made well in advance of the testing date if possible.

The College Board Tests on 24 March will be given only at Air Force Examining Centers. This means that a candidate might be scheduled to take the tests at a center which is a considerable distance from his home. Therefore, each candidate should take the tests on 3 March if at all possible.

If a candidate has taken the College Board Tests during the current school year, the scores he achieved will be accepted by the Academy, provided he writes the College Entrance Examination Board and asks that his scores be forwarded to the Director of Admissions.<sup>1</sup> However, a candidate is encouraged to take the tests again since he may improve on his previous scores. The use of scores from previous years is not recommended, although they may be accepted under special circumstances if a satisfactory explanation is provided to the Director of Admissions.

The fee for College Board Tests will be paid by the Department of the Air Force, provided the tests are taken on 3 or 24 March. A free test voucher will be forwarded to the candidate along with his registration card for the College Board Tests. The candidate must mail both the test voucher and the registration card to the College Entrance Examination Board.

## PREVIOUS ACADEMIC RECORD

A candidate's previous academic record is an important part of his qualifications for appointment as a cadet. Rank-in-class is the principal measure of high school academic achievement. Experience has demonstrated that a candidate graduating in the lower half of his high school class does not have a reasonable chance of later success at the Academy, even if qualified by College Board test standards.

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<sup>1</sup>To request the College Board descriptive booklets or previous test scores the candidate should write to the College Entrance Examination Board either at Box 592, Princeton, N. J., or Box 27896, Los Angeles, Calif. Candidates who live in Montana, Wyoming, Colorado, New Mexico and states west should write to the Los Angeles office; others should write the New Jersey office.

Therefore, a candidate whose rank-in-class falls below the established qualifying level may be disqualified even though qualifying scores are achieved in the entrance examinations. A record of exceptional preparatory school work or satisfactory college level work can offset a poor high school record. On the other hand, evidence of unsatisfactory preparatory or college level work will be disqualifying.

## LEADERSHIP POTENTIAL

Evaluation of leadership potential is based on participation and distinction in high school extracurricular activities and the recommendations of school principals and teachers. No qualifying standards are established in this area. However, if two candidates are being considered with equal qualifications in the examinations and academic achievement, the one who has shown the greater leadership potential has the better chance of selection.

## ADMISSION DEPOSIT AND TRAVEL EXPENSES

Each cadet will be requested to deposit \$300 when admitted to the Academy. A cadet who finds it impossible to provide the full sum may deposit a smaller amount. The deposit will be credited to the cadet's account to help pay initial costs of uniforms issued to him on a charge basis after admission. Failure to make a deposit is no bar to admission. However, a cadet with no deposit will have his initial uniform costs deducted on a pro rata basis from his monthly pay of \$111.15. In order to meet necessary expenses and participate in normal activities, he must be extremely economical with his pay until the initial uniform costs have been deducted from his account. Each candidate selected for the Academy receives a copy of the *Cadet Budget* which includes specific information regarding the entrance deposit.

Except for a member of the armed forces who is provided transportation under joint travel regulations, each selected candidate is allowed six cents per mile for travel expenses to the Academy from his home in the United States or point of entry into the country. The allowance will be credited to his account following admission, unless he makes a specific request that the money be sent to his parents. If the allowance is credited to his account, the cadet may choose to apply the sum toward his entrance deposit.

## OBLIGATIONS OF CADET APPOINTMENT

Upon admission each cadet will be required to sign an agreement, with the consent of his parents or guardian if a minor, that he will fulfill these obligations:

1. He will complete the course of instruction at the Air Force Academy.
2. He will accept an appointment and serve as a commissioned officer in a Regular component of one of the armed services for four years.
3. If authorized to resign from the Regular component before the sixth anniversary of his graduation, he will serve as a commissioned officer in the Reserve component until the sixth anniversary.
4. If discharged from the Air Force Academy before graduation, he will accept transfer to the Air Force Reserve, in an appropriate enlisted grade, to complete the six-year service obligation.

The Department of Defense has established the four-year obligated tour for graduates of all service academies. Current Air Force policy requires that the four-year tour will begin upon the completion of basic pilot training for Air Force Academy graduates who elect pilot training. Academy graduates who do not enter pilot training will begin their four-year tour immediately upon graduation.

Each cadet is required to take the following Oath of Allegiance: "I, \_\_\_\_\_(*name*), having been appointed an Air Force Cadet in the United States Air Force, do solemnly swear (or affirm) that I will support and defend the Constitution of the United States against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties of the office on which I am about to enter. So Help Me God."



## CADET VACANCIES FOR THE CLASS ENTERING IN JUNE 1962

<i>United States Senators</i>	100
<i>United States Representatives</i>	437
<i>District of Columbia</i>	2
<i>Puerto Rico</i>	1
<i>Canal Zone</i>	1
<i>President</i>	22
<i>Regular Components</i>	22
<i>Reserve Components</i>	23
<i>Sons of Deceased Veterans</i>	10
<i>Honor Military and Naval Schools</i>	10
<i>Qualified Alternates</i>	172*
<i>Total</i>	800

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\*Or whatever additional number may be authorized to meet the needs of the Air Force without exceeding the authorized strength of the Air Force Cadet Wing.

## DEFINITION OF TERMS

*Applicant* — One who makes application to a Member of Congress or other nominating authority for appointment to the Air Force Academy.

*Nomination* — Submission to Air Force Headquarters of an applicant's name as a nominee for appointment consideration.

*Candidate* — A nominee whose name has been forwarded to the Academy Director of Admissions and recorded as an official candidate.

*Qualified Candidate* — A candidate who meets the minimum requirements on the entrance examinations and fulfills the other criteria for appointment.

*Appointment* — Official Air Force designation of a qualified candidate to fill a cadet vacancy. All appointments are made by direction of the President.

*Cadet* — A candidate who has accepted the appointment, has entered the Academy, and has been sworn in as a cadet.

## SUMMARY

### *Steps of Congressional Nomination and Appointment*

1. An applicant must write to a United States Senator from his state or to a United States Representative from his Congressional district requesting nomination.
2. The Member of Congress will reply to the application. He may furnish information on screening examinations which he requires, namely the Civil Service examination and the preliminary medical examination.
3. An applicant who is chosen for nomination will ordinarily receive a notice from his Senator or Representative prior to official notification by the Academy Director of Admissions. The Academy does not send official notification until after the Congressman has submitted the nomination.
4. As soon as possible following the notification, the Director of Admissions will send an instruction kit to the candidate which includes: (a) An authorization letter showing the time and place to report for the Air Force examinations. (b) A test registration card and free test voucher which the candidate must mail to the College Entrance Examination Board to be scheduled for the College Board Tests. (c) Forms which the candidate must submit. (d) A booklet of instructions to be used as a guide in completing forms and taking the entrance examinations.
5. A candidate takes the Air Force examinations at an Air Force Examining Center for two days as scheduled between December and March. A candidate takes the College Board Tests on 3 March 1962 (regular date) or with sufficient reason may postpone to 24 March 1962 (makeup date).
6. Candidates selected for appointment to the cadet class will receive notification in mid-May. The class enters on 25 June 1962.



# Preparation



## PREPARATION GUIDE FOR CANDIDATES

### *Previous Education*

The majority of young men admitted to the Air Force Academy enter immediately after graduation from high school. Those who feel that they need additional academic preparation, or who were unable to obtain appointment immediately upon graduation, are encouraged to attend a civilian college or university while waiting to try for a subsequent class. Since there are many fine institutions of higher learning throughout the country, the Academy does not attempt to recommend specific schools for preparation.

### *Transfer Credit or Validation*

College credits are transferable to the Air Force Academy if the courses correspond to those in the Academy curriculum and an acceptable grade level has been achieved. Credit for college level courses completed in secondary or preparatory schools may be given if the cadet can demonstrate an acceptable level of achievement in courses corresponding to those at the Academy. One way of demonstrating achievement is through the College Entrance Examination Board Advanced Placement Tests.<sup>1</sup> The Academy Registrar, with approval of appropriate department heads, will consider advanced placement test scores and validate courses with acceptable scores.

Young men who are preparing for the Academy should plan to transfer credit or validate courses whenever possible. Cadets who have done so will be able to complete their prescribed courses sooner than they would otherwise. In this way they will have more time to take electives, major in a subject area, and prepare for post-graduate study. It is anticipated that a number of Academy graduates will be selected for advanced study early in their careers.

No matter how many courses a cadet may validate or transfer, he must enter as a Fourth Classman and spend four years at the Academy.

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<sup>1</sup>The advanced placement tests are administered in May of each year at College Board examining centers throughout the country. Registration in advance, including payment of fee, is necessary. Information on registration procedures, fees, testing dates, and examining centers is contained in the bulletin, *Advanced Placement Examinations*, available without charge. This bulletin may be obtained by writing to the College Board Advanced Placement Examinations at one of the following addresses: Box 592, Princeton, N. J., or Box 27896, Los Angeles 27, Calif.

### ***Academic Preparation***

The College Board Tests measure a candidate's potential for success in the cadet academic program of liberal arts and science studies. For adequate academic preparation in high school, a young man should definitely take the following subjects and strive for better than average grades in his class work:

English — 4 units

Intermediate Mathematics — 3 units (Studies should include basic algebraic, geometric, and trigonometric concepts and related skills.)

The following subject areas are recommended as an additional background for the academic program. A prospective candidate should try to take as many courses as possible which embrace these areas in the sciences, social sciences, and humanities.

#### *Sciences*

Biology  
General Science  
Chemistry  
Physics  
Advanced Mathematics  
Mechanical Drawing  
Aeronautics  
Electronics

#### *Social Sciences*

Economics  
American Government  
International Relations  
American History  
World History  
World Geography

#### *Humanities*

Foreign Languages  
Public Speaking  
Psychology  
Philosophy

Typing is recommended in addition to the above courses. Typewriters are available to cadets for typing themes and reports.

The Academy does not require specific school courses or credits for entrance. A candidate does not have to be a high school graduate to gain admittance. In most cases, however, one who has completed or is studying courses in the above subject areas will have a better chance of succeeding on the entrance examinations.

A person who attends college in preparation for the Academy should concentrate on Fourth Class and Third Class subjects outlined in the Academy Curriculum Summary which follows this chapter.

### ***Physical Preparation***

All young men who are preparing for the Academy should maintain a high degree of physical fitness through participation in sports and through proper care of health. There is a definite correlation between physical fitness and the ability to succeed in the Academy's program of cadet education and leadership training.



A physical aptitude examination is given to each candidate to measure his coordination, strength, and agility. Candidates may prepare for this examination by engaging regularly in vigorous physical activity.

A cadet's first two months at the Academy are devoted to a strenuous physical program of basic cadet training. Physical exertion is required from morning until night as the cadet goes through physical conditioning and military training. Those cadets who have conditioned themselves to the level required for vigorous athletic team sports will be better prepared to meet the physical demands. Each candidate is encouraged to practice strenuous conditioning exercises until many repetitions of the exercise can be accomplished without undue physical strain. Legs, arm and shoulder strength should receive special emphasis.

### ***Leadership Preparation***

All phases of the Academy curriculum are devoted to preparing the cadet for leadership in the Air Force. Active participation in high school extracurricular activities can provide valuable experience in preparing for positions of leadership responsibility.

Young men who desire to enter the Academy should participate in some extracurricular activities which develop leadership skills. These may include both athletic and non-athletic activities. Some examples of leadership in extracurricular activities are as follows:

1. Presiding officers of classes, clubs or student government.
2. Athletic participation and achievement.
3. Meritorious awards in athletic or non-athletic activities.
4. Attaining Eagle Scout rank.
5. Officer rank in the Reserve Officer Training Corps.
6. Managerial offices such as manager or editor of a school paper.
7. Participation in public speaking activities.
8. Participation and achievement in the Civil Air Patrol.

## **PREPARATORY SCHOOL FOR SERVICEMEN**

### ***Scope***

The Air Force Academy Preparatory School course is designed for young men in the armed services. The course includes academic,

physical, and military instruction which begins in the fall and continues into spring. The course gives the serviceman an opportunity to prepare for the Academy entrance examinations on an equal basis with a civilian candidate who is still in high school or has recently been graduated. It also prepares the serviceman for the Academy curriculum of academic, airmanship, and athletic courses.

Complete information concerning the preparatory school is contained in a brochure available upon request from the Director of Admissions, United States Air Force Academy, Colorado.

### ***Application***

A member of any one of the armed services on extended active duty may apply for preparatory school through his unit commander. Details of application and eligibility are outlined in a joint Air Force, Army, and Navy regulation. (Specific regulation numbers are AFR 53-14, AR 350-59, BUPERS INST. 1530.49, NAVMC 1155.) A request for preparatory school should be submitted as soon as possible after 1 March 1961. The application period closes on 30 June 1961 for members of the Regular components.

Members of the Air Force Reserve and Air National Guard not on extended active duty may also make application for preparatory school. Applications should reach the Director of Admissions before 31 May 1961. Air National Guardsmen who are selected must then be enlisted in the Air Force Reserve. From Reserve status, candidates will be called to extended active duty to attend the Air Force Academy Preparatory School. Those who have not received basic training will be sent to Lackland Air Force Base for this purpose. Details concerning application of Reservists and National Guardsmen are contained in Air Force Regulation 53-14.

### ***Selection***

Selection of preparatory school students is accomplished by the Air Force Academy. Selection is based on the applicant's high school academic background, his athletic and non-athletic extracurricular activities, the recommendation of his commanding officer, and the Air Force Cadet Screening Test. Selection for preparatory school, or completion of the school, in no way guarantees the student an appointment to the Academy.

## PREPARATORY SCHOLARSHIPS

Two non-profit agencies, the Falcon Foundation and the Gertrude Skelly Trust, provide educational assistance programs to enable deserving young men to better qualify for admission to the Air Force Academy. These agencies have no official connection with the United States Air Force or the Air Force Academy. Neither do they have any connection with the Air Force Academy Foundation which raises funds to provide recreational and cultural facilities for the Academy.

### ***The Falcon Foundation***

The Falcon Foundation provides preparatory scholarships annually for highly motivated and qualified young men seeking admission to the Academy and a lifetime career in the Air Force. The scholarships are awarded to a limited number of deserving young men who need financial assistance to achieve preparatory schooling.

The Foundation makes annual cash grants for these scholarships to specific preparatory schools in various parts of the nation. Application for scholarships and information concerning the schools must be made directly to the Falcon Foundation, Post Office Box 611, Dallas, Texas.

### ***The Gertrude Skelly Trust***

The late Mrs. Gertrude Skelly of Tulsa, Oklahoma, wife of William G. Skelly, founder of the Skelly Oil Company, established this trust fund. It is administered by two Trustees: Mr. Harold C. Stuart, president of KVOO Radio and Television and former Assistant Secretary of the Air Force, and Mr. Russell F. Hunt, Executive Vice-President of the First National Bank and Trust Company, Tulsa.

Scholarships from this trust fund will be awarded only to sons, adopted sons or step-sons of active, retired, or deceased *career* members of the armed forces of the United States. A young man should not apply unless his father was or is a *career* member of the armed forces.

The applicant may make his own choice of preparatory school, either on the high school or college level. He must apply for financial assistance before 1 May to enter school in September. Complete information on applications may be obtained by writing to The Gertrude Skelly Trust, Box 1349, Tulsa, Oklahoma.



# The Academy Curriculum

## SUMMARY IN SEMESTER HOURS

4th Class	Summer	3rd Class	Summer
Chemistry 100	$\frac{1}{2}$	Military Stu 210	4
Leadership Stu 110	6		
Military Stu 110	$\frac{3}{4}$		
Navigation 110	$\frac{1}{4}$		
Physical Educ 110	$1\frac{1}{2}$		
	<hr/>		
	9		

	Fall & Spring		Fall & Spring
Mathematics 101-102	11	Mathematics 201-202	6
Chemistry 101-102	6	Physics 211-212	6
Chemistry 111	$2\frac{1}{2}$	History 211-212	6
History 111-112	6	Foreign Lang 211-212	10
English 101-102	6	Political Sci 201-202	5
Geography 111	$2\frac{1}{2}$	Leadership Stu 201	$2\frac{1}{2}$
Physical Educ 101-102	2	Economics 202	$2\frac{1}{2}$
Physical Educ 105	2	Physical Educ 205	2
	<hr/>		<hr/>
	38		40

	May		May
Geography 123	2	Military Stu 213	$1\frac{1}{2}$
Military Studies 113	$1\frac{1}{2}$	Leadership Stu 213	$1\frac{1}{2}$
Physical Educ 113	$\frac{1}{4}$	Physical Educ 203	$\frac{1}{4}$
	<hr/>		<hr/>
	$3\frac{3}{4}$		$3\frac{1}{4}$

2nd Class	Summer
Military Stu 310	2 $\frac{3}{4}$
Leadership Stu 310	3
	<hr/>
	5 $\frac{3}{4}$

1st Class	2nd Class May 1st Class Summer
Pilot Tng 410	1 $\frac{1}{2}$
Astronautics 411	2 $\frac{1}{2}$
Leadership Stu 410	1 $\frac{1}{2}$
Military Stu 410	1
Physical Educ 410 or 420	1 $\frac{1}{4}$
	<hr/>
	5 $\frac{3}{4}$

	Fall & Spring
Mechanics 321	2
Mechanics 331-332	6
Aeronautics 301-302	6
English 301-302	6
Elec Engr 321-322	6
Law 311-312	5
Economics 311	2 $\frac{1}{2}$
Leadership Stu 302	2 $\frac{1}{2}$
Physical Educ 301	1
Physical Educ 305	2
	<hr/>
	39

	Fall & Spring
Aeronautics 401-402	6
Astronautics 412	2 $\frac{1}{2}$
Astronautics 421-422	5
Physics 401	3
Elec Engr 401	3
English 401-402	6
Political Sci 411-412	6
Physical Educ 405	1
Elective Program	2 $\frac{1}{2}$
	<hr/>
	35

	May
Military Stu 423	1 $\frac{1}{4}$
Physical Educ 410 or 420	1 $\frac{1}{4}$
	<hr/>
	1 $\frac{1}{2}$

**GRAND TOTALS**

ACADEMIC PROGRAM	144 $\frac{1}{2}$
AIRMANSHIP PROGRAM	25 $\frac{1}{2}$
ATHLETIC PROGRAM	12 $\frac{1}{2}$
1st CLASS ELECTIVE	2 $\frac{1}{2}$
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## **PRESCRIBED CURRICULUM**

The Academy curriculum consists of a diversified range of courses to prepare the cadet for a broad scope of activity as an Air Force officer. The curriculum is divided into three phases of cadet education: the Academic Program supervised by the Dean of the Faculty, the Airmanship Program supervised by the Commandant of Cadets, and the Athletic Program supervised by the Director of Athletics.

Since the Academy has the same general educational objectives for all students, the framework of the curriculum is based on standardized or prescribed courses. A total of 185 semester hours is included in the four-year prescribed curriculum. This total is at least 40 hours greater than required for an undergraduate degree by most engineering schools and 60 hours above that of a liberal arts school. Careful organization of cadet time and utilization of the summer months for instruction make it possible for the Academy to provide the additional semester hours.

The academic year consists of the fall semester from late August through December, the spring semester from January through April, the May term during the month of May, and the summer term from June through August.

Academic courses are usually accomplished during the fall and spring semesters. Physical education and athletics are spread throughout the year. Airmanship courses, which include field trips to military installations, are concentrated in the May and summer terms.

## **ENRICHMENT PROGRAM**

### ***Objectives***

To allow for the wide variances in individual student abilities, preparation, and achievements, the Academy has developed a program of elective courses and major subjects beyond the prescribed curriculum known as the "Enrichment Program." The objectives of this program are: to enable cadets to advance as fast as they can academically; to stimulate gifted students to make the best possible use of their time and their minds; to give credit for the previous college education of many cadets; to broaden the field of study open to cadets; and to offer them the opportunity to specialize.

### ***Methods of Participation***

A cadet may participate in the enrichment program in any or all of the following ways:

*By Transfer Credit* — Any cadet who has previous college education is required to have all transcripts submitted to the Academy Registrar. All candidates selected for admission will be notified to submit complete transcripts prior to reporting to the Academy. If records indicate an acceptable level of achievement in courses corresponding to those in the Academy curriculum, the Registrar may grant transfer credit, subject to approval of the heads of departments concerned. The cadet is exempt from taking the courses in which transfer credit is granted, but he must carry a normal course load by substituting courses with approximately the same semester hours.

*By Validation* — A cadet who has completed college-level courses in a secondary or preparatory school, or has acquired extensive knowledge of a subject without a college-level course, may be given validation credit for corresponding courses in the Academy curriculum. The cadet must qualify either through grades achieved on validation examinations administered at the Academy or through scores achieved previously on the College Board Advanced Placement Examinations. For courses validated, the cadet must substitute courses with approximately the same semester hours in order to carry a normal course load.

*By Acceleration* — Cadets with special preparation or above average capability may be selected to take one or more prescribed courses at an accelerated rate in order to free more time in their schedule for enrichment courses. The Departments of Mathematics, Chemistry, and English offer the majority of accelerated courses. Cadets who have made high scores on the College Entrance Examination Board Tests, the College Board Advanced Placement Examinations, or advanced placement tests administered at the Academy may be eligible for accelerated courses. Also, cadets who have taken corresponding courses at other institutions but have not been awarded transfer credit may be eligible.

*Extra Electives* — A gifted cadet also has the opportunity to take extra elective courses above the prescribed semester hour load each semester, provided he maintains above average academic grades in all prescribed courses.



## MAJORS OFFERED

Through sufficient participation in the enrichment program, a cadet may major in one of four areas: Basic Sciences, Engineering Sciences, Public Policy, and Humanities. These majors are so designed that in most cases gifted students with no prior college-level preparation can complete them by the extra elective method alone. Specific requirements for each of the majors are shown under the respective academic division objectives which precede the division course listings.

## MASTER'S DEGREE PLAN

The enrichment program has been extended to permit selected cadets to work toward master's degrees during four years at the Academy. Starting with the Class of 1963, the first full strength class to enter the Air Force Academy, cadets who have extensive college transfer or validation credit will be given the opportunity to complete the requirements for a master's degree. The actual award of the degree will depend upon Congressional authorization and regional accreditation. Initially, the requirements for a master's degree are available only in two areas: Astronautics and Public Policy.

## GRADING

The quality of a cadet's performance in any academic course is reported by means of letter grades. These grades denote character of work and are assigned quality points as follows:

<i>Grade</i>	<i>Character</i>	<i>Quality Points Per Semester Hour</i>
A	Excellent	4
B	Good	3
C	Satisfactory	2
D	Passing	1
F	Failing	0

Cadets are expected to maintain an academic average of C or better. While a D grade is passing for any one course, a C average in

all courses is necessary to satisfy the requirements for graduation. Thus a cadet must maintain a cumulative grade point average of 2.0.

The general policy of the Academy is to grade frequently on daily recitations, general reviews, and assignments prepared outside of class. A cadet is expected to be prepared to participate and recite any time he is in class.

Progress reports are published regularly during the semester to inform cadets of their grades. Grade reports are published at the end of each semester.

## DEFICIENCY AND DISMISSAL

A cadet who falls below specified grade criteria will be placed on academic probation. He will be counseled by faculty members and given the opportunity for extra instruction.

A cadet who fails only one course at the end of a semester, but has a satisfactory grade point average, will be given a chance to remedy the grade through a turnout examination. Should he fail the examination, he must repeat the course.

A cadet who fails a course or has a below minimum grade point average is reported to the Academy Board for consideration of his case. Cases reported to the Academy Board usually receive one of the following recommendations: a specified conditioned period, turnback to the next succeeding class, or dismissal from the Academy. Other cases coming before the Board are deficiencies in conduct (demerits) or in aptitude for commissioned service.

## CADET ACHIEVEMENT

Cadets are recognized for achievement in academic courses, airmanship performance, and athletic participation as follows:

1. Cadets who excell in academic courses are placed on the Dean's List at the end of each fall and spring semester. The list consists of cadets whose grade point average for the semester is at least 3.0.

2. Cadets who excell in airmanship performance are placed on the Commandant's List at the end of each fall and spring semester.

The list consists of the top 25% in each class who have demonstrated the greatest cadet effectiveness.

3. Cadets who are on both the Dean's and Commandant's Lists are carried on the Superintendent's List denoting excellence in both academics and airmanship.

Cadets whose names appear on either of these lists are granted additional privileges according to their class. They are recognized for this distinction by an insignia on the sleeve of the uniform. Cadets on the Dean's List wear a small silver star, those on the Commandant's List wear a silver wreath, and those on the Superintendent's List wear a silver star enclosed in a silver wreath.

Athletic awards are presented at the annual awards banquet during June Week. Individual and team trophies are given to winners of intramural competition. Cadets receive letters and numerals to be worn on athletic jackets for their participation and achievement in intercollegiate competition. Special awards are given for outstanding performance in varsity sports.

## CLASSROOM BUILDINGS

All academic and airmanship lecture classes and the basic science laboratories are conducted in Fairchild Hall. The typical classroom is small, seating 12 to 16 cadets in a U-shape around the instructor. Large lecture rooms are available for consolidating classes and holding assemblies. Applied science laboratories are held in a separate building just south of Fairchild Hall. Physical education and athletics are held in the cadet gymnasium and adjoining athletic fields.

## COURSE NUMBERS

In the course listings that follow, prescribed and enrichment courses are shown by divisions and departments. Prescribed courses in the 100 series are designed for the Fourth Class (Freshman) level; the 200 series for the Third Class (Sophomore) level; the 300 series for the Second Class (Junior) level; the 400 series for the First Class (Senior) level; and the 500 series for the graduate level. Enrichment courses may be taken at any class level, provided the prerequisites are met.

Prescribed and enrichment courses are identified by the second digit of the course number. Prescribed course numbers have a second digit of 4 or less; enrichment course numbers have a second digit of 5 or above. The semester or term a prescribed course is offered is indicated by the third digit of the course number as follows: course numbers ending in 0 are summer term courses, those ending in 3 are May term courses, and those ending in other odd numbers are fall semester courses.

## **FACULTY LISTINGS**

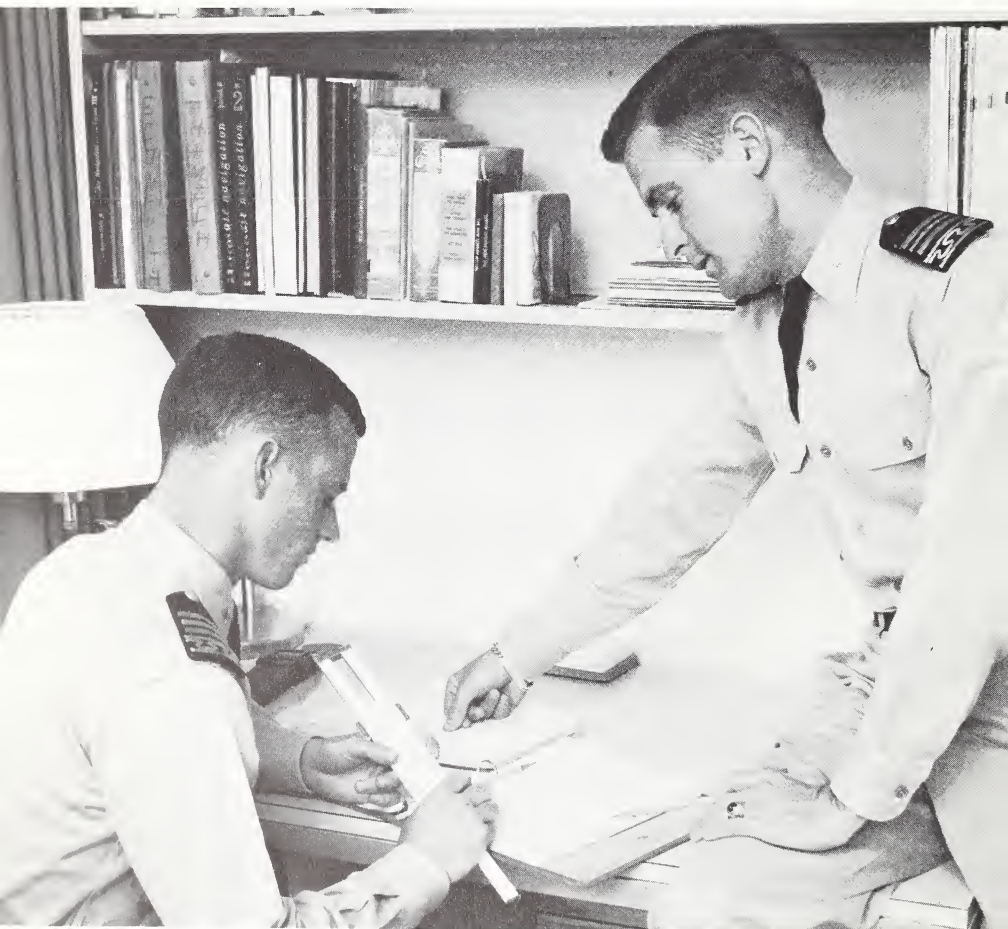
A directory with the names of faculty members and staff, their duty assignments, and their degrees is located in the catalog appendix. A majority of the faculty members are Air Force officers. A few officers from the United States Army, Navy, and Marine Corps and from air forces of allied nations serve in a liaison capacity. The normal tour of duty for instructional personnel at the Academy is four years. There are 21 key faculty positions authorized to be occupied by professors with permanent tenure.



# Academic Program

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*The Air Force Academy is  
an accredited institution  
of higher learning, recognized  
in 1959 by the North Central  
Association of Colleges  
and Secondary Schools.*



DEAN OF THE FACULTY: Brig. Gen. R. F. McDermott

The Academic Program embraces four years of undergraduate study leading to a Bachelor of Science degree. The program provides a general education with courses balanced between the liberal arts and sciences. The curriculum is carried out by departments within four major academic divisions: Basic Sciences, Applied Sciences, Humanities, and Social Sciences.

## DIVISION OF BASIC SCIENCES

*Division Chairman:* Col. W. T. Woodyard.

The Division of Basic Sciences offers courses in mathematics, chemistry, physiology, and physics. The cadet develops knowledge and skills in basic subjects which are necessary to an understanding of science in the modern world, with particular attention to the background necessary for an Air Force career. Laboratory work develops the scientific method of obtaining results through accurate observation, critical thinking, and logical reasoning. Included in the prescribed curriculum are 35½ semester hours in basic sciences. Cadets who wish to qualify for a major in basic sciences must satisfy all requirements of the prescribed courses and in addition complete 15 semester hours in enrichment courses. The courses may include any one of the three marked with one asterisk below and all the others listed.

<i>Course Nr</i>	<i>Course Title</i>	<i>Semester Hrs</i>
Chem 353 ( <i>Note</i> )	Theoretical Chemistry	3
Chem 451*	Space Physiology	2½
Math 151	Statistics	2½
Math 251	Differential Equations	2½
Math 252*	Vector Analysis	2½
Nav 351*	Descriptive Astronomy	2½
Phys 452 ( <i>Note</i> )	Principles of Modern Physics	} 2
Phys 453	Principles of Nuclear Physics	
Phys 454	Neutron Physics	2½

*Note:* Chem 353 is offered as a 2½ or 3 semester hour course; it must be taken as a 3 hour course to meet the above requirements. Phys 452 and 453 replace Phys 401, a 3 semester hour prescribed course, giving 2 semester hours of enrichment credit.

## DEPARTMENT OF CHEMISTRY

*Professor and Head of Department:* Col. W. T. Woodyard

### **Prescribed Courses**

#### *Chemistry 100. Introduction to Physiological Indoctrination*

Introduction to the physical characteristics of the atmosphere and their effects on the airman. Includes a simulated flight in an altitude chamber and the award of a passenger card upon successful completion of the course.  $\frac{1}{2}$  Semester Hour

#### *Chemistry 101-102. General Chemistry*

Kinetic-molecular theory, periodic law, properties of solutions, chemical formulas, acid-base theory, chemical reactions, chemical equilibria, the concepts of equivalent weights and the combining capacities of the elements. An introduction to the field of organic, nuclear, and analytical chemistry. 6 Semester Hours

#### *Chemistry 111. Human Physiology*

An introduction to the principles of physiology on both a cellular and organ-system level with references to the basic principles of living systems, cellular biochemistry, aero and space physiology.  $2\frac{1}{2}$  Semester Hours

### **Enrichment Courses**

#### *Chemistry 151. Accelerated General Chemistry*

Kinetic-molecular theory, periodic law, properties of solutions, chemical formulas, acid-base theory, chemical reactions, chemical equilibria, the concepts of equivalent weights and the combining capacities of the elements. Prerequisites: Previous college level chemistry with acceptable grades and/or sufficiently high score on the American Chemical Society standardized examination, as determined by the Department of Chemistry. (Successful completion grants validation credit for Chem 101 and fulfills the requirement for Chem 102.) 3 Semester Hours

#### *Chemistry 353. Theoretical Inorganic Chemistry*

Atomic structure to include build-up of periodic table and introduction to fundamental wave mechanics. Chemical bonding including elementary wave mechanics for covalent compounds, hybridization, ionic crystals and coordination compounds. Three semester hours obtained by special reports in the aforementioned areas. Prerequi-

sites: Chem 102 or equivalent; completion of or concurrent enrollment in Math 202, Phys 212, or equivalents.  $2\frac{1}{2}$ -3 Semester Hours

*Chemistry 451. Introduction to Space Physiology*

Introduction to principles of physiology as applied to man in space. Emphasis on biological effects of space environmental conditions such as weightlessness, cosmic and solar radiation hazards, physiology of sealed cabin environments, and psycho-physiology of isolation and sensory-deprivation. A brief introduction to the historical development of space travel and rocketry. Prerequisites: Chem 102, Chem 111, Math 102 or equivalents; Phys 212 and Phys 401 or equivalents desirable.  $2\frac{1}{2}$  Semester Hours

*Chemistry 551. Chemical Reactions and Rates*

Chemical kinetics to include chain reactions, catalysis, and heterogeneous and homogeneous reaction mechanisms and rates. Collision and rate theories from the statistical approach. Thermochemistry to include bond energies, Hess' Law, and dissociation. High temperature aspects of these areas are stressed. Three semester hours obtained by special reports in the aforementioned areas. Prerequisites: Chem 102, Chem 353, Math 202, Phys 212 or equivalents.  $2\frac{1}{2}$ -3 Semester Hours

## DEPARTMENT OF MATHEMATICS

*Professor and Head of Department:* Col. J. W. Ault

### **Prescribed Courses**

*Mathematics 101. College Algebra, Statistics, Trigonometry*

Mathematical processes and applications related to the fundamentals of college algebra, plane and spherical trigonometry, statistics, and use of the slide rule.  $5\frac{1}{2}$  Semester Hours

*Mathematics 102. Analytic Geometry and Introduction to Calculus*

Mathematical processes and applications related to the fundamentals of plane analytics and differential and integral calculus for simple functions.  $5\frac{1}{2}$  Semester Hours

*Mathematics 201-202. Calculus and Introduction to Differential Equations*

Differential and integral calculus of algebraic and transcendental functions, solid analytics, infinite series, partial differentiation,



multiple integration, and an introduction to differential equations.  
6 Semester Hours

### ***Enrichment Courses***

#### *Mathematics 161. Accelerated Mathematics No. I*

Statistics, spherical trigonometry, plane analytics, differential and integral calculus for simple functions. (Successful completion grants validation credit in Math 101 and fulfills the requirement for Math 102.) Prerequisite: Permission of the department. 5½ Semester Hours

#### *Mathematics 162. Accelerated Mathematics No. II*

Differential and integral calculus of algebraic and transcendental functions, solid analytics, infinite series, partial differentiation, multiple integration, and an introduction to differential equations. (Additional work will be required so that this course, meeting 5½ times per week, will fulfill the requirements for Math 201-202.) Prerequisite: Permission of the department. 6 Semester Hours

#### *Mathematics 151. Statistics*

Fundamentals of descriptive and inductive statistics including graphs, measures of central tendency, variation, theoretical distributions, probability, sampling, prediction and related principles with applications to operations and systems analysis. Prerequisite: Math 101 or equivalent. 2½ Semester Hours

#### *Mathematics 251. Differential Equations*

A continuation of the differential equations covered in Math 202, including Laplace transforms with considerable emphasis on applications. Prerequisite: Math 202 or equivalent. 2½ Semester Hours

#### *Mathematics 252. Vector Analysis*

Vector algebra and vector calculus including vector notation, algebraic manipulation of vector quantities, vector differentiation and integration with related topics and applications. Prerequisite: Math 202 or equivalent. 2½ Semester Hours

#### *Mathematics 451-452. Advanced Engineering Mathematics*

Selected topics from real variable theory, Fourier series, complex variable, special functions and probability theory. Prerequisite: Math 251. 5 Semester Hours

*Mathematics 551. Machine Computation*

Introduction to stored programming and numerical analysis. Preparation of selected problems for solution by digital computers. Prerequisite: Math 251.  $2\frac{1}{2}$  Semester Hours

## DEPARTMENT OF PHYSICS

*Professor and Head of Department:* Col. Archie Higdon

### **Prescribed Courses**

*Physics 211. General Physics*

Fundamental principles of statics, dynamics, fluid mechanics, and sound. Prerequisites: Math 102 or concurrent enrollment in Math 161. 3 Semester Hours

*Physics 212. General Physics*

Fundamental principles of heat, light, optics, electricity, and magnetism. Prerequisite: Phys 211. 3 Semester Hours

*Physics 401. Introduction to Modern Physics*

Introduction to the fundamental concepts and experimental basis of modern physics. Topics include properties of atoms and nuclei, origin of spectra, fundamental particles, nuclear reactions, natural and artificial radioactivity, quantum theory, relativity, fission, and thermo-nuclear reactions. Major emphasis on analysis and solution of problems. Prerequisites: Phys 211-212 and Math 202. 3 Semester Hours

### **Enrichment Courses**

*Physics 452. Principles of Modern Physics*

Selected topics of modern physics such as the theory of relativity, electrons and photoelectric effect, the quantum theory and wave mechanics, atomic structure, spectra, and fundamental particles. Applications of mathematical physics are emphasized. Prerequisites: Phys 211-212 and Math 202, or permission of the department.  $2\frac{1}{2}$ -3 Semester Hours

*Physics 453. Principles of Nuclear Physics*

Selected topics of nuclear physics such as alpha, beta, gamma emission; nuclear interactions; particle detection; nuclear forces, cosmic rays; fission and fusion; nuclear spins and magnetism. Emphasis on depth and mathematical rigor. Prerequisites: Phys 452 or permission of the department.  $2\frac{1}{2}$ -3 Semester Hours

*Physics 454. Neutron Physics*

An advanced undergraduate or first year graduate course in the fundamental principles of neutron utilization. Topics include criticality developments, aspects of fusion, attenuation of nuclear radiations, nuclear sensing devices, and advanced nuclear propulsion schemes. Emphasis on mathematical development and derivation. Prerequisites: Phys 452-453.  $2\frac{1}{2}$  Semester Hours

**DIVISION OF APPLIED SCIENCES**

*Division Chairman:* Col. J. V. G. Wilson

The Division of Applied Sciences offers courses in aerodynamics, astronautics, electrical engineering, mechanics, and thermodynamics. These engineering sciences are important in preparation for Air Force career fields in manned aircraft or guided missiles. Emphasis is placed on Air Force applications to give the cadet a basic knowledge of modern weapon systems and the problems associated with their complexities. In laboratory work the cadet enhances his ability to apply the scientific method to the solution of problems and the evaluation of experiments. Included in the prescribed curriculum are 39 semester hours in the applied sciences. Cadets who wish to qualify for a major in engineering sciences must satisfy all requirements of the prescribed courses and in addition complete 20 semester hours in enrichment courses, as follows:

<i>Course Nr</i>	<i>Course Title</i>	<i>Semester Hrs</i>
Aero 455	Heat Transfer	$2\frac{1}{2}$
Aero 451 } Aero 453 } Aero 456 }	Fluid Mechanics (Note 1) Supersonic Aerodynamics Aerodynamics	2
Math 251	Differential Equations	
Math 252	Vector Analysis	
Mech 351 } Mech 352 } Mech 353 }	Statics (Note 2) Dynamics Mechanics of Materials	2
Mech 355	Properties of Eng Materials	
Phys 452 } Phys 453 }	(Note 3) Principles of Modern Physics Principles of Nuclear Physics	2
Sci 461-5	Design	

*Note 1:* These three courses replace Aero 401-2, a 3 semester hour prescribed sequence, giving 2 semester hours of enrichment credit.

*Note 2:* These three courses replace Mech 331-2, a 6 semester hour prescribed sequence, giving 2 semester hours of enrichment credit.

*Note 3:* These two courses replace Phys 401, a 3 semester hour prescribed course, giving 2 semester hours of enrichment credit.

## DIVISION OF AERONAUTICS

*Professor and Head of Department:* Col. G. C. Clementson

### ***Prescribed Courses***

#### *Aeronautics 301. Fundamental Thermodynamics*

Classical thermodynamics treating the various phenomena of energy with particular reference to laws which govern the transformation of heat into useful work and power. An introduction to fluid mechanics. Prerequisites: Completed or enrolled in Phys 212 and Math 202. 3 Semester Hours

#### *Aeronautics 302. Thermodynamic Principles*

Thermodynamic principles as they apply to air conditioning, refrigeration, and power plants with emphasis on gas turbines and rocket motors used in aircraft and weapons. An introduction to heat transfer. Prerequisite: Aero 301. 3 Semester Hours

#### *Aeronautics 401. Basic Aerodynamics*

Fundamental concepts of analyzing subsonic and supersonic air flow. Includes airfoil theory, wing theory, and drag estimation. Prerequisite: Aero 301. 3 Semester Hours

#### *Aeronautics 402. Applied Aerodynamics*

Power required and power available curves; fundamentals of performance analysis; longitudinal and lateral static stability; control forces and hinge moments of several configurations; introduction to dynamic stability. Prerequisites: Aero 401 or 451 and Aero 453. 3 Semester Hours



***Enrichment Courses***

Students who desire additional instruction in aerodynamics may substitute Aero 451, 453 and 456 for Aero 401-402.

***Aeronautics 451. Fluid Mechanics***

Fundamental concepts for describing and analyzing the flow of fluids about an immersed body. Includes the flow of incompressible and compressible fluids in pipes, the theory of dimensional analysis and similitude, and an introduction to potential flow theory. Prerequisites: Completed or enrolled in Mech 352. For graduate program candidates only, completed or enrolled in Mech 351. 2½ Semester Hours

***Aeronautics 453. Supersonic Aerodynamics***

Supersonic flow, hypersonic and transonic flow problems, and an introduction to boundary layer problems and turbulence. Prerequisite: Aero 451. 3 Semester Hours

***Aeronautics 455. Introduction to Heat Transfer***

Basic phenomena of energy transport by conduction, convection, and radiation heat transfer in solids and viscous fluids. Special problems involving heat transfer such as rocket motor design, aerodynamic heating, and heat exchangers. Prerequisites: Math 202, completed or enrolled in Aero 301. 2½ Semester Hours

***Aeronautics 456. Aerodynamics***

Development of airfoil and wing theory for subsonic flow. Includes aircraft performance, longitudinal and lateral static stability and control, steady state maneuvers, and an introduction to dynamic longitudinal stability. Prerequisite: Aero 451. 2½ Semester Hours

***Aeronautics 464. Preliminary Design of Aircraft Vehicles***

Fundamentals of design including a preliminary design of an advanced airlift vehicle. Includes analysis of power required and power available curves, longitudinal and lateral static stability, steady state maneuvers, control forces, and hinge moments. Prerequisites: Aero 453, 456. 4 Semester Hours

***Aeronautics 465. Analysis and Design of a Turbojet Engine***

Principles of thermodynamics, fluid mechanics, and dynamics are applied to the preliminary design of a modern aircraft power plant. Prerequisite: Aero 302. 4 Semester Hours

*Aeronautics 551. Dynamics of Flight*

Analysis of dynamic systems and multiple degrees of freedom, stability derivatives, dynamic response of the rigid aircraft, use of electromechanical stability augmentation, and automatic control. Prerequisites: Math 251, Aero 456. 3 Semester Hours

*Aeronautics 552. Thermal Jets*

Momentum theorem; one dimensional thrust equation as applies to turbojets, turboprops, ramjets, and rockets; cycle analysis for various propulsive ducts; estimated performance charts. Prerequisite: Aero 302. 3 Semester Hours.

*Aeronautics 553. Advanced Rocket Propulsion*

Chemical rocket motors, nozzle theory, heat transfer, thrust chambers, liquid and solid propellants, performance and testing. Advanced rocket propulsion systems. Prerequisite: Aero 302. 3 Semester Hours

*Aeronautics 562. Independent Study. 6 Semester Hours***DEPARTMENT OF ASTRONAUTICS**

*Professor and Head of Department:* Col. R. C. Gibson

***Prescribed Courses****Astronautics 411. Elements of Astronautics*

The physics of ballistic missiles and satellites. Includes study of two-body trajectories and proofs of Kepler's laws of planetary motion; times-of-flight; effects of earth rotation; powered trajectories including optimum staging re-entry trajectories. Studies in all technical areas are related to military operational considerations. Prerequisites: Math 202, Aero 302, Mech 332 or Mech 352 and 353. 2½ Semester Hours

*Astronautics 412. Space Technology*

Fundamentals of flight dynamics to include lunar flight trajectories, interplanetary operations, and low-thrust flight. Advanced propulsion systems to include nuclear and ion propulsion. Prerequisite: Astro 411. 2½ Semester Hours

*Astronautics 421. Linear System Analysis*

Systematic methods of setting up physical problems in terms of linear mathematical models. Systematic methods of solving sets of linear

differential equations with constant coefficients. Introduction to the concepts of complex frequency, block diagrams, and transfer functions. Examples used are drawn largely from the areas of servomechanisms, missile control, and stable platforms. Prerequisites: Math 202, Mech 332 or Mech 352 and 353, completed or enrolled in EE 401. *2½ Semester Hours*

*Astronautics 422. Ballistic and Space Vehicle Guidance*

Gyroscopic and accelerometer theory leading up to the instrumented inertial and "Schuler tuned" stable platforms, supplemented by gyro and accelerometer demonstrations and experiments. Philosophy of guidance systems for ballistic and space vehicles proceeding from ballistic free-flight reference trajectories through determination of guidance constants, generation of steering signals, inertial and radar measurements, gravity compensation, and composite inertial and radio guidance systems. Comparison of inertial to radio (command) guidance systems. Interplanetary guidance schemes including methods of instrumenting for mid-course and terminal space guidance. Prerequisites: Astro 411 and 421. *2½ Semester Hours*

**Enrichment Course**

*Astronautics 551. Advanced Astronautics*

Advanced topics in astronautics. Prerequisites: Astro 411, 412, 421, 422. *2½ Semester Hours*

## DEPARTMENT OF ELECTRICAL ENGINEERING

*Professor and Head of Department:* Col. J. V. G. Wilson

**Prescribed Courses**

*Electrical Engineering 321. (Lab) Circuits and Machinery*

Circuit analysis using phasor representation and complex algebra to include polyphase circuits, transformers, and introduction to electrical machinery, both AC and DC. Prerequisites: Phys 211, Math 202. *3 Semester Hours*

*Electrical Engineering 322. (Lab) Machinery and Basic Electronics*

Continuation of study of electrical machinery followed by an introduction to electronics to include vacuum tubes and vacuum tube amplifiers. Prerequisite: EE 321. *3 Semester Hours*

*Electrical Engineering 401. (Lab) Intermediate Electronics*

Electronics applications to include the use of high vacuum and gas tubes in oscillators, wave-shaping circuits, radio transmitters and receivers, and television receivers. Introduction to transistors. Prerequisite: EE 322. 3 Semester Hours

**Enrichment Courses***Electrical Engineering 453. Analog Computation*

Analog computer techniques as applied to the solution of differential equations arising in engineering problems. Topics considered are electronic computing circuits, scale factors, and time scales. Emphasis is placed upon use of equipment in the solution of typical problems. Prerequisites: Math 251, EE 321. (May be taken concurrently with EE 321 by consent of department.) 2½ Semester Hours

*Electrical Engineering 464. Design by Electronic Analog Simulation*

Applications of an analog computer to engineering design problems. Methods and design problems applicable to nonlinear systems, partial differential equations, and algebraic models in the fields of applied science. Prerequisite: EE 453. 4 Semester Hours

*Electrical Engineering 551. Servomechanism Analysis*

Synthesis and analysis of complex servomechanism systems involving multiple loops. Prerequisites: Math 251, Astro 421, EE 401. 3 Semester Hours

*Electrical Engineering 552. Advanced Electronics*

A more comprehensive treatment of electronics than is offered in EE 401. Emphasis is placed upon the AC equivalent circuits of electronic circuits and their solution to provide information on system performance. In addition to detailed analysis of vacuum tube circuits, an introduction to transistors and magnetic amplifiers is included. Prerequisite: EE 401. 3 Semester Hours

**DEPARTMENT OF MECHANICS**

*Professor and Head of Department:* Col. Archie Higdon

**Prescribed Courses***Mechanics 321. Basic Engineering Drawing*

Develops ability to read and understand technical drawings and to visualize objects in space. Includes freehand sketching, oblique and



isometric drawing, orthographic projection, descriptive geometry, intersections and developments, sections, convections, dimensioning, fasteners, aircraft working drawings, and construction of charts and graphs. 2 Semester Hours

*Mechanics 331-332. Engineering Mechanics, Strength of Materials*

The principles of statics and dynamics to include the free body diagram concept, the equations of equilibrium, friction, centroids, moments of inertia, kinematics, kinetics, mechanical vibrations. Strength of materials includes centric, torsional, and flexural loadings, columns, principal stresses, and some materials testing laboratory. 6 Semester Hours

***Enrichment Courses***

Students who desire additional instruction in mechanics may substitute Mech 351, 352 and 353 for Mech 331-332.

*Mechanics 325. Drawing*

Cadets demonstrating experience or capacity in engineering drawing but not in descriptive geometry may receive either transfer or validation credit in this course. This course will not be taught. 1 Semester Hour

*Mechanics 326. Descriptive Geometry*

Develops ability to read and understand technical drawings and to visualize objects in space. Includes sketching, orthographic projection, descriptive geometry, intersections and developments, aircraft working drawings, and construction of charts and graphs. Prerequisite: Must have transfer or validation credit in Math 325. 1 Semester Hour

*Mechanics 351. Statics*

The principles of statics to include the free body diagram concept, the equations of equilibrium, friction, centroids, moments of inertia, and the method of work. 2-3 Semester Hours

*Mechanics 352. Dynamics*

The principles of dynamics to include kinematics and three methods of solving kinetics problems: (1) force, mass, and acceleration; (2)

work and energy; (3) impulse and momentum. Mechanical vibrations are also studied. Prerequisite: Mech 351. 2-3 Semester Hours

*Mechanics 353. Mechanics of Materials*

The principles of mechanics of materials to include centric, torsional, flexural, columns, principal stresses, and some materials testing laboratory. Prerequisite: Mech 351. 2-3 Semester Hours

*Mechanics 355. Properties of Engineering Materials*

Properties of engineering materials oriented toward the special problems of materials used in manufacturing aircraft and missiles. Emphasis is placed on the fundamental science of materials including theory of solids, behavior under load, deterioration, and theory of mechanical testing. Prerequisites: Mech 332 or 353. 2-3 Semester Hours

*Mechanics 451. Fundamentals of Aircraft Structures*

Mechanics of aircraft structures to include unsymmetrical bending, curved flexural members, torsional resistance of thin-walled members and non-circular cross sections, and shear center calculation. Energy methods relating loads and deflections for both determinate and indeterminate structures. Prerequisite: Mech 332 or 353. 3 Semester Hours

*Mechanics 551. Aerospace Structures*

Aeroelastic phenomena to include deformation of structures under static and dynamic loading. Methods of structural analysis are covered for frameworks, shells, and columns. Some creep and thermal effects are discussed. Prerequisite: Mech 451. 3 Semester Hours

*Mechanics 552. Aircraft Vibrations*

Analysis of linear vibration problems with specific application to aircraft systems. Resume of mechanical vibrations with one-degree-of-freedom. Solution of multi-degree-of-freedom problems for free, damped, and forced motion to include LaGrange's equation, generalized coordinates, normal modes, and complex variable techniques. Elementary vibrations of continuous media, lateral vibration of beams or shafts, torsional vibration of circular shafts, and longitudinal vibration of bars. Prerequisite: Mech 352 and Math 251. 3 Semester Hours

## DIVISION OF HUMANITIES

*Division Chairman:* Col. P. R. Moody

The Division of Humanities offers courses in English, philosophy, foreign languages, history, and fine arts. Through these studies the cadet develops the skills of speaking and writing effective English; acquires an appreciation of literature; develops an understanding of major philosophical problems; attains facility in understanding and speaking a foreign language; and acquires a knowledge of Western heritage and contemporary world civilization. Included in the prescribed curriculum are 40 semester hours in the humanities. Cadets who wish to qualify for a major in humanities must satisfy all requirements of the prescribed courses and in addition complete 15 semester hours in enrichment courses, with at least one semester course in each humanities department. Selections may be made from the following courses:

<i>Course Nr</i>	<i>Course Title</i>	<i>Semester Hrs</i>
Engl 451-452	Fine Arts	2½-2½
Engl 455	Great Books	2½
Engl 351	Speech	2½
Engl 353	Shakespeare	2½
Engl 354	Ethics	2½
Engl 352	Modern American Lit	2½
For Lang 351-2	Seminar on Readings	2½-2½
Hist 351	U.S. Diplomatic Hist	2½
Hist 355	Advanced Military Hist	2½
Hist 212	History of Latin America	3
Hist 222	History of the Far East	3
Hist 232	History of Russia	3
	Any Public Policy enrichment course	

## DEPARTMENT OF ENGLISH

*Professor and Head of Department:* Col. P. R. Moody

### *Prescribed Courses*

*English 101-102. Composition and Introduction to Literature*

Major emphasis is upon development of a clear, forceful prose style. The cadet writes a number of themes and one research paper; reads and analyzes several short stores. 6 Semester Hours

*English 301. Problems in Philosophy*

A study of major philosophical problems such as the nature of man, knowledge, values, and social responsibilities. Based on readings from such eminent philosophers as Plato, Aristotle, Aquinas, Kant, and Mill. Prerequisite: Cadet must have completed Engl 101-102 or Engl 151-152, received a grade of "B" or better in similar courses at an accredited college or university, and have 2nd Class standing. 3 Semester Hours

*English 302. Masterworks of Western Literature: Homer through the 16th Century*

Reading and analyzing some of the masterworks of Western literature dating from the period of Homer through the 16th Century. Such major writers as Homer, Aeschylus, Sophocles, Chaucer, and Shakespeare are studied. Prerequisite: Cadet must have completed Engl 301 or 354, received a grade of "B" or better in a similar course at an accredited college or university, and have 2nd Class standing. 3 Semester Hours

*English 401. Masterworks of Western Literature: 17th-19th Centuries*

Reading and analyzing some of the masterworks of Western literature in the 17th, 18th, and 19th Centuries. Such major writers as Milton, Keats, Hardy, Flaubert, Ibsen, and Dostoyevsky are studied. Prerequisite: Completion of Engl 302. 3 Semester Hours

*English 402. Masterworks of Modern Western Literature*

Reading and analyzing some of the masterworks of Western literature from the late 19th Century to the present. Such major writers as T. S. Eliot, Conrad, Faulkner, Joyce, and Camus are studied. Prerequisite: Completion of Engl 401. 3 Semester Hours

**Enrichment Courses**

In addition to the following enrichment courses, period and genre courses and tutorials designed for individual cadets may be offered. The list below does not include all enrichment courses offered, but does indicate the variety of course offerings.

*English 151. Composition and Speech*

Advanced expository writing, the library research paper, and public speaking. (Cadets who have successfully completed freshman Eng-



lish at some other institution or who demonstrate exceptional ability in English substitute this course for Engl 102 after validation of Engl 101.) *3 Semester Hours*

*English 152. Masterworks of Modern Western Literature*

Contemporary literature studied by types. Includes instruction in modern short stories, short novels (Lawrence, Kafka, Mann, Dostoyevsky) and poetry. (Cadets who have successfully completed Engl 151 substitute this course for Engl 402.) *3 Semester Hours*

*English 351. Speech*

Informative and persuasive speaking. Approximately 15 speeches, 5 to 20 minutes in length, are required. Prerequisites: Engl 101-102 or equivalent. *2½ Semester Hours*

*English 352. Modern American Literature*

Reading and analyzing representative works of some major American writers not included in the prescribed literature courses. Prerequisite: Engl 101-102 or equivalent. *2½ Semester Hours*

*English 353. Shakespeare*

An intensive study of several Shakespeare plays not included in the prescribed literature courses. Plays selected represent periods of Shakespeare's development and include comedies, histories, and tragedies. Emphasis on plot development, theme, character development, and style. Prerequisites: Engl 101-102 or equivalent. *2½ Semester Hours*

*English 354. Ethics*

A study of ethical concepts with emphasis on individual moral values. (This course may be substituted for Engl 301.) No prerequisite. *2½ Semester Hours*

*English 451. Introduction to the Fine Arts*

Provides the basis for an understanding of painting, sculpture, and architecture beginning with the classical period and extending through the Renaissance. Includes a consideration of style, medium, organization, and techniques of analysis, together with an examination of the works of such representative figures as Giotto, Botticelli, Leonardo da Vinci, Michelangelo, Raphael, and El Greco. Cadets do related projects in tempera, clay, and oils. Prerequisites: Engl 101-102 or equivalent. *2½ Semester Hours*

*English 452. Introduction to the Fine Arts*

A continuation of Engl 451, providing a basis for an understanding and appreciation of painting, sculpture, architecture, and music beginning with the baroque styles and continuing through to the present. Representative artists include Rembrandt, Reynolds, Gainsborough, the Impressionists, Cezanne, Van Gogh, Picasso, Chagall, and Kandinski. Among the musicians studied are Bach, Mozart, Beethoven, Tschaikovsky, Debussy, Stravinsky, Bartok, and Schoenberg. Cadets do four oil paintings demonstrating various styles. Prerequisites: Engl 101-102 or equivalent. Engl 451 is recommended but not mandatory. *2½ Semester Hours*

*English 455. Great Books*

Study and discussion of some of the great books of world literature. Concentration is mainly on writers not included in other courses offered by the department. Such writers as Dante, Cellini, Cervantes, Swift, Goethe, Tolstoy, and Joyce are studied. Prerequisites: Engl 101-102 or equivalent. *2½ Semester Hours*

**DEPARTMENT OF FOREIGN LANGUAGES**

*Professor and Head of Department:* Lt. Col. A. R. Miele

***Prescribed Courses***

Each cadet is required to complete 10 semester hours in French, German, Russian, or Spanish.

*Foreign Language 211. (Fr 211 — Elem Spoken French, I; Ger 211 — Elem Spoken German, I; Russ 211 — Elem Spoken Russian, I; Span 211 — Elem Spoken Spanish, I)*

Introduction to a foreign language with emphasis on understanding and speaking. Structural analysis by induction. Prerequisite: 3rd Class standing. *5 Semester Hours*

*Foreign Language 212. (Fr 212 — Elem Spoken French, II; Ger 212 — Elem Spoken German, II; Russ 212 — Elem Spoken Russian, II; Span 212 — Elem Spoken Spanish, II)*

Continuation of For Lang 211. Includes some practice in reading and writing. Introduction to culture and customs. Prerequisite: 3rd Class standing and For Lang 211. *5 Semester Hours*

**Enrichment Courses**

Those cadets who satisfactorily complete the basic language course and are interested in doing advanced work are given the opportunity to enroll in a seminar-type enrichment course on selected literary readings conducted in the foreign language.

*Foreign Language 351. (Fr 351 — Seminar on Selected Readings; Ger 351 — Seminar on Selected Readings; Russ 351 — Seminar on Selected Readings; Span 351 — Seminar on Selected Readings)*

Designed to develop further the student's comprehension and speaking abilities; to strengthen the student's knowledge of the structure of the language; and to increase his understanding of the people whose language he is studying. Prerequisite: 1st or 2nd Class standing, For Lang 211 and 212 or equivalent. (Fall semester only) 2½ Semester Hours

*Foreign Language 352. (Fr 352 — Seminar on Selected Readings; Ger 352 — Seminar on Selected Readings; Russ 352 — Seminar on Selected Readings; Span 352 — Seminar on Selected Readings)*

Continuation of For Lang 351 with same basic objectives. Prerequisite: 1st or 2nd Class standing, For Lang 211 and 212 or equivalent, plus departmental approval. (Spring semester only) 2½ Semester Hours

**DEPARTMENT OF HISTORY**

*Professor and Head of Department:* Lt. Col. W. H. Ruenheck

**Prescribed Courses**

*History 111. Modern European History*

A survey of European history from approximately 1500 A.D. with major emphasis placed on developments in the 19th and 20th Centuries. Stresses the continuity of European development since the medieval period. 3 Semester Hours

*History 112. History of the United States*

A study of the major governmental, social, economic, cultural, diplomatic, and ideological developments of the American nation from 1783 to the present. Emphasizes the evolution of democratic ideas

and institutions and the impact on modern history of the emergence of the United States as a world power. Prerequisite: Hist 111 or equivalent. 3 *Semester Hours*

(If equivalent credit is given for Hist 112, the department head may authorize enrollment in Hist 212, 222 or 232 prior to enrollment in Hist 211.)

### *History 211. Military History*

An investigation of the scope and complexity of war. Includes the historical development and analysis of military principles, theory, trends, strategy, doctrine, weapons, organization, logistics, and tactics. Covers military affairs and civil-military relations, with emphasis upon the major wars of the 20th Century during which aerial warfare emerged. Prerequisites: Hist 111-112 or equivalent. 3 *Semester Hours*

(Cadets are required to complete either Hist 212, 222 or 232 to fulfill prescribed history curriculum.)

### *History 212. History of Latin America*

The discovery, conquest, and growth of Spanish and Portuguese America. Emphasizes political, social, economic, and cultural institutions since Wars of Independence. Prerequisites: Hist 111, 112 and 211 or equivalents. 3 *Semester Hours*

### *History 222. History of the Far East*

Development of civilizations of Asia with particular emphasis on China and Japan. Emphasizes the fundamental cultural institutions of these areas and the political, social, and economic effects of 19th and early 20th Century relationships with Western powers. Implications for contemporary tensions are stressed. Prerequisites: Hist 111, 112 and 211 or equivalents. 3 *Semester Hours*

### *History 232. History of Russia*

Survey of the political and social development of the Russian nation, with equal emphasis on Imperial Russia and the Soviet Union. Stresses the Bolshevik Revolution, Marxist-Leninist doctrine, growth of the Communist State, and Soviet foreign relations since World War II. Prerequisites: Hist 111, 112 and 211 or equivalents. 3 *Semester Hours*



### ***Enrichment Courses***

In the following courses 2½ semester hours may be extended to 3 semester hours for cadets who undertake special projects. Prerequisites are completion of prescribed history courses. Hist 212, 222 and 232 may be taken as enrichment courses by cadets who either have completed or are currently enrolled in one of these courses on a prescribed basis.

#### ***History 351. United States Diplomatic History***

Survey of American diplomatic history from the Revolution to the present. Stresses the evolution of fundamental foreign policies such as the Monroe Doctrine, Open Door, Freedom of the Seas, and Pan-Americanism. 2½ Semester Hours

#### ***History 355. Advanced Military History***

Historical investigation of the ideas of selected major military thinkers ranging from Machiavelli to Douhet and their impact on the development of military doctrine. Includes a series of special lectures by members of the department, reporting on the results of personal research in military history. 2½ Semester Hours

## **DIVISION OF SOCIAL SCIENCES**

*Division Chairman:* Col. W. W. Posvar

The Division of Social Sciences offers courses in economics, geography, law, and political science. These courses are designed to provide understanding of the national and international environment in which policies of the United States government are formulated, to furnish background for progression to eventual command and staff positions affecting policy, and to instill a lasting interest in the social sciences leading to further education and self study. Included in the prescribed curriculum are 30½ semester hours in social sciences. Cadets who wish to qualify for a major in social sciences must satisfy all requirements of the prescribed courses and in addition complete any six of the following enrichment courses:

<i>Course Nr</i>	<i>Course Title</i>	<i>Semester Hrs</i>
Econ 352	Comparative Economic Systems	2½
Econ 353	International Economics	2½
Econ 551	Public Finance and Defense Econ	2½

Geog 351	Political Geography	2½
Law 451	American Constitutional Law	2½
Law 551	International Law	2½
Lead Stu 355	Sociology	2½
Pol Sci 351	Political Parties	2½
Pol Sci 352	Political Theory	2½
Pol Sci 353	Contemporary Political Thought	2½
Pol Sci 551	Public Administration	2½
Pol Sci 552	International Organization	2½

## DEPARTMENT OF ECONOMICS AND GEOGRAPHY

*Professor and Head of Department:* Lt. Col. W. A. Yeoman

### ***Prescribed Courses***

#### *Geography 111. Elements of Geographical Science*

A study of fundamentals in three areas of earth sciences: physical geography, cartography, and geodesy. Physical geography considers the description and analysis of the earth's physical features, causes and distribution of the climactic regimes, the natural vegetative responses, and evolved soil types. Cartography deals with the representation of the earth upon a flat surface, various projections and aerial photographs used for this purpose, and characteristics of each. Geodesy stresses the problem of determining size and shape of the earth and the precise location of points on its surface. Together these three areas of study provide tools for understanding the concepts to be examined in Geog 123. 2½ Semester Hours

#### *Geography 123. World Geography*

Develops understanding of the basic elements of world geography. Both the pattern and nature of the cultural environment are examined. Fundamentals learned in Geog 111 are applied with a regional connotation. A basic vocabulary is acquired of significant places of the world and the products or services for which each is noted. 2 Semester Hours

#### *Economics 202. Economic Principles and Problems*

Emphasizes economic principles and problems applicable to the mixed enterprise system of the United States. Concentrates on the following: the institutions and behavior patterns of various economic

sectors represented in the national product accounts and use of the accounts as an analytical tool; the theory and mechanics of national income determination, fluctuation, and stabilization; the role of pricing, elements of supply and demand that affect prices, current pricing practices in the United States, and the theory and mechanics of international trade. *2½ Semester Hours*

*Economics 311. Economic Principles and Problems*

A continuation of Econ 202. Primarily concerned with selected problems of a public policy nature that affect specific economic sectors; the elements of U.S. economic conflict with the USSR; the economic foundations for U.S. security; and alternative approaches to solution of basic economic problems. Prerequisite: Econ 202. *2½ Semester Hours*

*Economics 403. Personal Finance*

A study of personal financial problems confronting members of the armed forces. Emphasis is placed upon the development of investment programs which should be helpful in maintaining personal financial responsibility. A survey of such investment vehicles as common stocks, bonds, investment companies, real estate, and life insurance is included. (Class of 1962 only.) *1 Semester Hour*

**Enrichment Courses**

*Geography 351. Political Geography*

A study of geographic elements as they affect internal and external functions of states. The student is provided with an understanding of geographical considerations which influence national power and a firm geographical basis for further studies in the field of public affairs. *2½ Semester Hours*

*Economics 352. Comparative Economic Systems*

A study of selected national economies using the following sequential approach. First, a basis for comparison is established by considering the most important goals of any society — goals such as efficiency, economic growth, equitable income distribution, and economic freedom. Second, the theories of capitalism, socialism, and communism are studied to give a background of past opinions as to the ideal economy. Third, and the largest portion of the course, existing economies of the world are described, analyzed, and evaluated in terms of their attainment of selected economic goals. The course concludes

with a series of seminars, conducted by the cadets, comparing all economies as to their relative attainment of the desired economic goals. Prerequisite: Econ 202. 2½ Semester Hours

*Economics 353. International Economics*

Survey of the nature and methods of international trade with emphasis in the following areas: the background of American foreign trade development; the accounting system of the balance of international payments; the adjustment of international disequilibrium; the operation of foreign exchange markets; the implications of tariff protection, import quotas, and other governmental economic relations. Also includes a survey of the problems of economic development, especially in underdeveloped countries. Emphasis is placed in the following areas: development planning, mobilizing domestic savings, avoiding inflation, and attracting foreign investment, both public and private. Prerequisites: Econ 202, 311 or equivalents. 2½ Semester Hours

*Economics 551. Public Finance and Defense Economics*

Includes first an examination of the revenue, expenditures, and debt management activities of government; fiscal policy, economic, and equity effects of these activities. The second part relates these principles and findings to defense economics in terms of the direction and magnitude of national security expenditures and their structural (business) and economic impacts, to include mobilization, ready-alert, and war economics. Prerequisite: Econ 311. 2½ Semester Hours

## DEPARTMENT OF LAW

*Professor and Head of Department:* Col. C. H. Munch

### *Prescribed Courses*

*Law 311-312. An Introduction to Law*

A survey of important precepts in the fields of elementary law, criminal law, criminal evidence; the international law affecting armed forces abroad; and some problems of personal estate planning. A study of the law, its terminology, and its function as a stable, flexible element of social order and military command. The relationship of law to personal and official affairs of members of the Air Force and society in general. Prerequisites: 3rd Class standing with Pol Sci



201 and Econ 202; or 4th Class standing with permission of department head. 5 *Semester Hours*

### ***Enrichment Courses***

#### ***Law 451. American Constitutional Law***

The historical background and case progress of American constitutional doctrine. Presents the judicial power as one of the moving forces in American economic, social, and political progress. Analyzes the legal theory of government including the doctrine of separation of powers; the division of powers within the federal system; and the constitutional guarantees of equal protection under the laws, due process, and freedom of speech, press, assembly, and religion. Prerequisites: 2nd Class standing; or 3rd Class standing and Pol Sci 201 with permission of department head. 2½ *Semester Hours*

#### ***Law 551. International Law***

The origins and evolution of international law, organized international collaboration, and the role of international law in world peace. A foundation in the principles of public international law, including territorial and aerial concepts of jurisdiction and functions of states and individuals within the international legal system. Comparisons are made between national law and public and private international law. Prerequisites: 2nd Class standing; or 3rd Class standing with permission from the department head. 2½ *Semester Hours*

## **DEPARTMENT OF POLITICAL SCIENCE**

*Professor and Head of Department:* Col W. W. Posvar

### ***Prescribed Courses***

#### ***Political Science 201. American National Government***

Development and organization of the national government. Nature, structure, powers, and procedures of legislative, executive, and judicial departments. Principles and basic institutions of the American federal system, the Constitution, civil and political rights, and party system. 2½ *Semester Hours*

#### ***Political Science 202. Contemporary Foreign Governments***

The emergence and experience of constitutional government in Europe, and the effect of western ideologies and political forms upon Oriental societies. An analysis of the political systems and constitu-

tional and legal structures of Great Britain, France, Germany, Soviet Union, Communist China, India, and Japan. An introduction to the diversity of governmental forms and political forces of these countries. Prerequisite: Pol Sci 201. 2½ Semester Hours

*Political Science 411. International Relations*

Contemporary international relations as revealed by analysis of interstate conflict and cooperation. Introduction to leading theories of international relations and traditional interpretations of state policy roles and objectives. Major emphasis is upon those forces comprising the bases of domestic and international political processes, policy means and ends, and attempts to limit international conflict. United States' participation in world affairs is treated by surveying American foreign policy. Prerequisite: Econ 311. 3 Semester Hours

*Political Science 412. Defense Policy*

Analysis of the interrelationships of military policy with foreign policy and national security policy. The environment for formulation of defense policy is examined in terms of enemy threats, the American political climate, and the impact of military technology. The institutional machinery for making strategy is analyzed with emphasis on military planning and resource allocation by means of the budget process. The substantive issues of strategy are evaluated including deterrence, the roles of active and passive defense, arms limitation, and regional security. Prerequisite: Pol Sci 411. 3 Semester Hours

**Enrichment Courses**

*Political Science 351. Political Parties and the Democratic Process*

An examination of the dynamics of political parties and interest groups within the context of American politics. Emphasis is placed upon the role which these institutions play in a democratic society and their influence on the decision-making processes of the federal government. Prerequisite: Pol Sci 201 to be taken prior to or concurrently with Pol Sci 351. 2½ Semester Hours

*Political Science 352. Political Theory*

An examination of ideas which form the basis of the more influential streams of political and social thought. Special attention given to problems of state, sovereignty, and law. Focus on formal political thinkers as well as the institutional and historical aspects of both

democratic and non-democratic political thought. Prerequisite: Pol Sci 201 to be taken prior to or concurrently with Pol Sci 352. 2½ Semester Hours

*Political Science 353. Contemporary Political Thought*

An inquiry into the theory and practice of political ideologies and institutions in the last hundred years. Emphasis on the roots of contemporary theories and an analysis of democracy, political and economic liberalism, socialism, fascism, and communism. Prerequisite: Pol Sci 201 to be taken prior to or concurrently with Pol Sci 353. 2½ Semester Hours

*Political Science 551. Public Administration*

The framework and politics of administration at various levels of government with emphasis on the national level. Stresses functions and responsibilities of executive officials and political authority of the more active agencies; investigates the characteristics of government organizations; and considers the tools of efficient administration in terms of objectives. Prerequisite: 2nd Class standing. 2½ Semester Hours

*Political Science 552. The Politics of International Organization and Regional Security*

The role of international and regional organizations in world politics, both as instruments of foreign policy and as contributions toward the development of an international community. Emphasis on the theories of international organization, constitutional problems, the development and significance of regional organizations, and the relations between diplomacy and international organizations. Prerequisite: 1st Class standing or permission of the department. 2½ Semester Hours





## THE AIR FORCE ACADEMY LIBRARY

*Director of Library:* Lt. Col. G. V. Fagan

The Air Force Academy Library provides a well balanced reference and reading collection to support the educational mission of the Academy. It contains all materials generally found in leading liberal arts and engineering colleges and universities. In addition, as a result of many gifts, the Library is developing a comprehensive reference and basic research collection in the field of airpower and aeronautical history. Also, it maintains a special collection of unique and rare items pertinent to the growth and development of the Air Force Academy.

The Library collection now numbers more than 130,000 items, and ultimately it will contain 250,000 volumes. The periodical reading section contains current issues of more than 1,000 magazines and 90 newspapers from all parts of the United States and from foreign countries.

The Library occupies the largest portion of one wing of Fairchild Hall, the academic building. Covering 78,000 square feet of floor space, the Library's three floors are serviced by a marble spiral stairway which is unique in its structural features and distinctive in its dramatic effect.

Included in the Library facilities is a listening area to aid instruction in foreign languages, poetry, historic speeches, and related subjects in the social sciences and humanities. The music room is used for instructional purposes as well as for the presentation of classical and semi-classical recorded concerts.

The Library holds membership in the Bibliographical Center for Research for the Rocky Mountain Region. By this means, books and periodicals from library sources throughout the United States and Canada are obtained on a loan basis for the use of patrons. The Academy Library is a selective depository for United States Government documents and for United Nations documents. It is also a source of technical report literature, such as RAND, ASTIA, NASA, and TEMPO Reports, for use in courses offered by the Basic and Applied Sciences Divisions. Included in the Library holdings are a microfilm collection, numbering more than 4,500 reels, and a vertical file of pamphlet series, brochures, data on various Air Force instal-

lations, and similar visual materials directly related to all aspects of the curriculum.

During 1960, more than 67,000 items were circulated, and registered borrowers totaled more than 2,500. Statistically this amounts to a per capita use of 26.8 compared with a national average of 16.8 among other college and university libraries.

## ACADEMIC COUNSELING

*Division Counselors:* Lt. Col. O. L. Cox, Division of Humanities; Maj. T. K. Berge, Division of Basic Sciences; Maj. H. C. Caroom, Division of Social Sciences; Maj. D. S. Lopez, Division of Applied Sciences

The academic counseling program is carried out by a counselor representing each academic division. The division counselors monitor the work of faculty advisers who counsel individual cadets on course schedules, degree plans, course progress or deficiencies. The academic counselors review college transcripts of all incoming cadets and recommend that transfer credit be awarded for courses corresponding to those in the Academy curriculum. They devote considerable time to the progress of cadets in the enrichment program, giving special attention to exceptional cadets participating in graduate courses.

## AUDIO-VISUAL SERVICES

*Director of Audio-Visual Services:* Maj. W. C. Flannigan

The Office of Audio-Visual Services provides teaching materials to all instructional departments to contribute to more effective learning. These materials include charts, slides, motion pictures, records, models, mock-ups, instructional manuals, and workbooks. The office also provides motion picture and slide projectors, tape recorders, record players, and any other projection, sound, and recording equipment used in instruction.

# Airmanship Program





## COMMANDANT OF CADETS: Brig. Gen. W. T. Seawell

The purpose of the Airmanship Program is to train and motivate the cadet for a career of leadership as an officer in the United States Air Force. The program includes military studies, leadership studies, command training, and flying. *Military studies* promotes the attitudes and provides the professional knowledge required of an Air Force officer. Through field trips to military installations and specialized training at the Academy, these objectives are carried out by practical application. *Leadership studies* introduces the cadet to the principles of leadership through instruction in psychology and management. Upperclass cadets receive practical applications of leadership through the instruction of basic cadets and through a two-week individual assignment to an Air Force squadron. *Command training* within the Air Force Cadet Wing also provides opportunity for practice in leadership as well as development of character and discipline. *The flying program* motivates and prepares the cadet for a career in the aerospace age. Cadets receive an introduction to flying in the T-29 navigation aircraft and the T-33 jet trainer. When light-plane flying is implemented, each cadet will receive ten hours of pilot indoctrination. Cadets who are physically qualified and desire additional flying instruction may volunteer for a pilot screening course.

## DEPARTMENT OF MILITARY STUDIES

*Director of Military Studies:* Lt. Col. M. L. Boswell

### ***Prescribed Courses***

*Military Studies 110. Growth and Development of the USAF*

The evolution of airpower from the early days to the present, centered around the film "The Air Force Story."  $\frac{3}{4}$  Semester Hour

*Military Studies 113. National Security and the Armed Forces*

Study of the national security organization and the military instrument of national power, emphasizing the USAF in preparation for Field Study of the Armed Forces.  $1\frac{1}{2}$  Semester Hours

*Military Studies 210. Field Study of the Armed Forces*

Five-week field trip within the United States to Army and Navy units; SAC, TAC, and ADC combat units; USAF support units. 4 Semester Hours



*Military Studies 213. Applied Aerospace Power and Armed Forces*

Introduction to global airpower and a study of armed forces, both foreign and domestic, in preparation for Field Study of Overseas Areas. 1½ Semester Hours

*Military Studies 310. Field Study of Overseas Areas*

Four-week field trip to pivotal areas in Europe, the Far East, or Latin America to observe global airpower and armed forces. An insight into the various cultures of allied nations is gained through the trip. 2¾ Semester Hours

*Military Studies 410. Contemporary Military Thought*

A study of current military concepts and trends in aerospace systems; development of national security programs shaping the future of military operations. Discussion of current career prospects in major operational commands. 1 Semester Hour

*Military Studies 423. Aerospace Operations*

Review of current military aerospace systems and national space programs; a field study to military and civilian missile installations; presentations by major commands emphasizing changes in technology and current personnel requirements; and a review of peripheral areas, ground, flight, nuclear, and safety as they affect aerospace operations. 1¼ Semester Hours

**DEPARTMENT OF LEADERSHIP STUDIES**

*Director of Leadership Studies:* Lt. Col. G. D. Ofiesh

***Prescribed Courses****Leadership Studies 110. Basic Military Training*

Transition from civilian to military life. Indoctrination in the overall Academy program, cadet regulations, the Honor Code, manual of arms, drill, customs and courtesies, and other general military subjects. Introduction to basic Air Force weapons, firing course (M-1 rifle and .38 caliber pistol), and survival training exercise. 6 Semester Hours

*Leadership Studies 201. Psychology of Individual Behavior*

Principles of basic and applied psychology, learning, motivation, adjustment, individual differences, and performance evaluation. 2½ Semester Hours

*Leadership Studies 213. Instructor Training*

Fundamentals and techniques of military instruction. 1½ Semester Hours

*Leadership Studies 302. Human Relations in Management*

Principles of management, group attitudes, communication, leadership, and organization problems. Case studies, with role-playing based on actual leadership situations in the Air Force. 2½ Semester Hours

*Leadership Studies 303. Psychology of Family Relations*

Transition from single to married life, with emphasis on the social psychology, cultural factors, and financial considerations which inhibit or contribute to healthy family and marital relations. (Class of 1962 only.) 1 Semester Hour

*Leadership Studies 310. Duty with Basic Cadets*

Preparation for and participation in supervisory and instructional duties with the Basic Cadet Training Group. 3 Semester Hours

*Leadership Studies 410. Duty with Air Force Unit*

Individual assignment to squadron grade position with an operational unit of the Air Force for two weeks. In-service training permits practical application of leadership and management principles. 1½ Semester Hours

**Enrichment Courses***Leadership Studies 355. Sociology*

Culture and its relation to specific social problems. Social institutions of American life today in relation to population changes, ethnic groups, and major problems of social policy. The social consequences of technological change. Techniques of social control in the metropolitan world. 2½ Semester Hours

**CADET WING COMMAND**

*Wing Air Officer Commanding:* Col. H. M. Henington

Command training provides cadets with opportunity for practice in leadership and for development of character and discipline. This training is conducted by Air Officers Commanding within the Air Force Cadet Wing. Cadets are scheduled for regular periods of drill,

parades, inspections, and small arms training. They also receive instructions in service customs, courtesy, conduct, and ethics. No credit is given for this training.

## DEPARTMENT OF NAVIGATION

*Director of Navigation:* Lt. Col. V. C. Conway

### ***Prescribed Flying Courses***

#### *Navigation 110. Introduction to Flying*

Introduction to the care and use of flying equipment and survival gear. Orientation flights and emergency procedures in the T-29 twin-engine navigation aircraft and the T-33 jet aircraft.  $\frac{1}{4}$  Semester Hour

#### *Pilot Training 410. Pilot Indoctrination*

Ten flying hours for each cadet in a light airplane and ten hours of related ground school. The ten flying hours are dual instructional flights under the supervision of a competent flight instructor. (This course will not be given until an airfield is available.)  $\frac{1}{2}$  Semester Hour

### ***Enrichment Course***

#### *Navigation 351. Descriptive Astronomy*

The earth as a planet and its motions within the solar system. An understanding of the motions of all members of the solar system including moons, planets, comets, and the sun, and the laws governing these motions. The historical development of astronomy from earliest times to the present. Systems of measurement and observations, and methods of reducing these observations to scientific fact.  $2\frac{1}{2}$  Semester Hours

### ***First Class Elective***

Immediate construction of an airfield has been recommended to Congress by the Academy Board of Visitors. When an airfield is available, First Class cadets who meet the pilot physical qualifications and desire additional flying will have an opportunity to enter a pilot screening course. Those who do not volunteer for additional flying may either take navigation orientation or choose  $2\frac{1}{2}$  semester hours of electives offered in the enrichment program. Projected course descriptions for pilot screening and navigation orientation are as follows:

*Pilot Training 401. Pilot Screening*

Designed to prepare the cadet for Air Force pilot training upon graduation. Consists of 30 flying hours in a light airplane and 30 hours of related ground school. Includes nearly all maneuvers and procedures taught in Air Force primary pilot training. When adequate proficiency has been demonstrated, the cadet will solo. 2½ Semester Hours

*Navigation 411. Navigation Orientation*

Thirty flying hours in a T-29 aircraft of which three 5-hour flights are flown during a week-end mission to other Air Force bases. Fifty hours of related ground school introduce the cadets to theoretical aspects and operational procedures of dead reckoning, airplot, celestial, grid, pressure pattern, loran, and radar navigation. Ten hours in ground simulators serve to integrate classroom instruction in preparation for airborne instruction. 2½ Semester Hours

## THE AIR FORCE ACADEMY PLANETARIUM

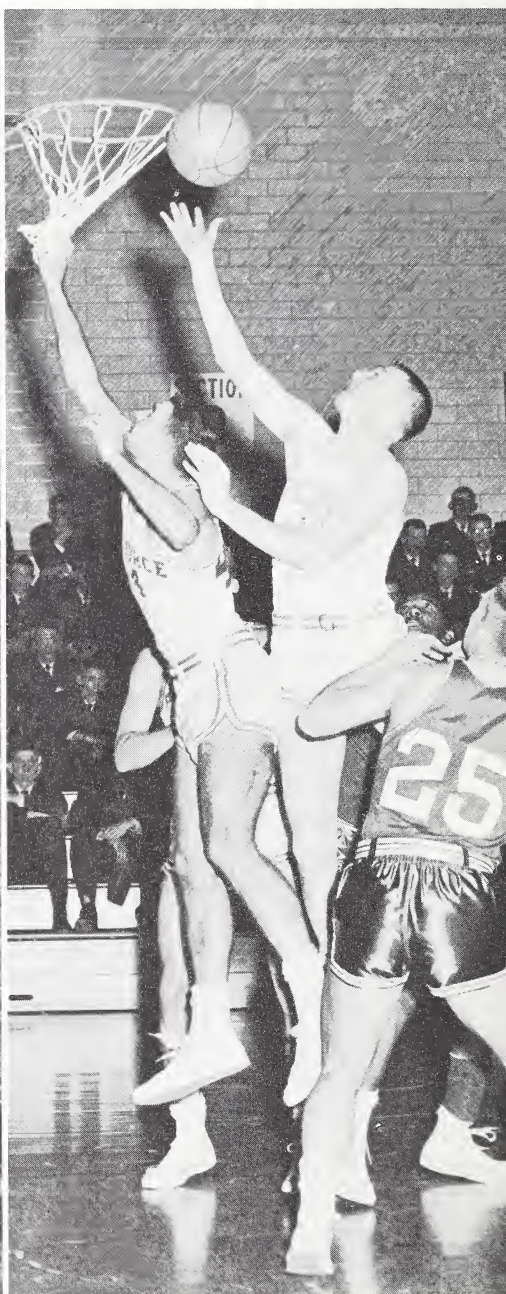
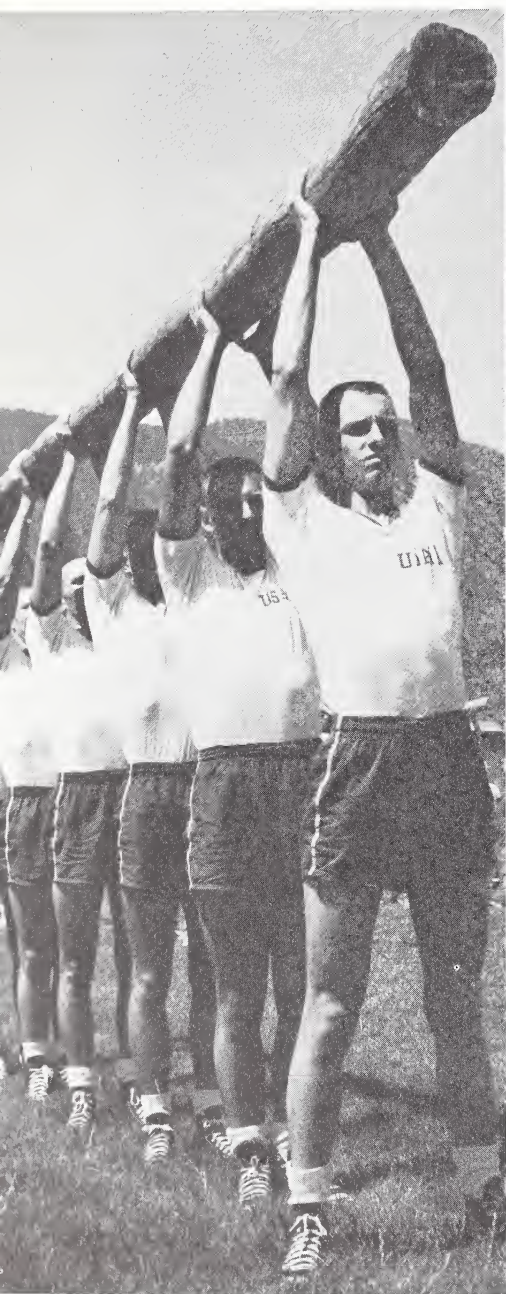
*Director of Planetarium:* Maj. R. J. Pfrang

The Planetarium is used to teach celestial theory and star identification to all cadets in their study of navigation. The giant multiple projector of the Planetarium can portray the panorama of the heavens on the building's 50-foot opaque aluminum dome. The instructor operates the projector from a master control board to simulate the effects he desires. The projector can accomplish realistic simulation of numerous movements that take place in the sky, such as comets, meteor showers, the northern lights, constellations, sunrise and sunset, and the planets in orbit. All stars visible to the eye, from the brightest to the dimmest, can be duplicated. Also, the stars can be put through rapid changes, such as moving forward or backward in time to show their past or future positions.

In addition to using the Planetarium for instructing cadets, the Academy makes it available to other educational institutions as well as the general public.



# Athletic Program



**DIRECTOR OF ATHLETICS: Col. M. L. Martin**

Physical education and athletics are an integral part of the cadet curriculum. Each cadet is required to complete the prescribed courses in physical education in addition to participating in intercollegiate or intramural athletics. The courses in physical education are designed to develop leadership characteristics, physical ability, and skills in carry-over sports. Intercollegiate athletics provide a source of competition for cadets in individual or team sports against other colleges or universities. Intramural athletics provide competition primarily in body contact sports for all cadets not participating on a varsity team.

**DEPARTMENT OF PHYSICAL EDUCATION**

*Head of Department of Physical Education: Lt. Col. J. F. Frakes*

***Prescribed Courses******Physical Education 110. Basic Physical Training***

Prepares the basic cadet for a strenuous program of physical education and athletics by developing physical strength, endurance, agility, and coordination through conditioning exercises; running the obstacle course; and participating in recreational sports. A physical ability examination and a swimming test are given to each basic cadet. Special courses in swimming and conditioning are given to those cadets who show need for improvement. *1½ Semester Hours*

***Physical Education 101. Boxing, Wrestling, Swimming, Gymnastics***  
Instruction in boxing, wrestling, swimming, and gymnastics every other academic day. *1 Semester Hour*

***Physical Education 102. Boxing, Judo, Swimming, Gymnastics***  
Instruction in boxing, judo, swimming, and gymnastics every other academic day. *1 Semester Hour*

***Physical Education 105. Competitive Athletics***  
Participation in intramural and/or intercollegiate athletics. *2 Semester Hours*

***Physical Education 113. Advanced Judo***  
Instruction in advanced judo techniques. *¼ Semester Hour*

***Physical Education 205. Competitive Athletics***  
Participation in intramural and/or intercollegiate athletics. *2 Semester Hours*

*Physical Education 203. Instructor Training*

Instruction and practice in techniques of giving conditioning exercises, combatives, guerilla exercises, and grass drills. Preparation for leadership in the Basic Cadet Physical Training Program.  $\frac{1}{4}$  Semester Hour

*Physical Education 301. Unarmed Combat, Volleyball, Badminton, Handball, and Squash*

Instruction and practice in unarmed combat, volleyball, badminton, handball, and squash. 1 Semester Hour

*Physical Education 305. Competitive Athletics*

Participation in intramural and/or intercollegiate athletics. 2 Semester Hours

*Physical Education 410. Golf*

Instruction and practice in golf.  $\frac{1}{4}$  Semester Hour

*Physical Education 420. Tennis*

Instruction and practice in tennis.  $\frac{1}{4}$  Semester Hour

*Physical Education 405. Competitive Athletics*

Participation in intramural and/or intercollegiate athletics. 1 Semester Hour

***Intramural Athletics***

Intramural athletics are a part of the physical education program. Each cadet who is not a member of an intercollegiate team participates in intramural athletics during the fall, winter, and spring seasons. Intramural participation provides each cadet with broad experience in sports competition. First and Second Classmen gain experience in organizing, coaching, and officiating through serving on intramural teams.

Each cadet squadron provides a team in every sport. Teams compete once or twice weekly during each season under the leadership of First and Second Classmen. Practice sessions are held on days that teams are not competing.

The annual schedule of intramural athletics is as follows:

Fall — football, soccer, field hockey, and cross-country

Winter — basketball, boxing, water polo, squash, and handball

Spring — rugby, swimming, wrestling, judo, and lacrosse



### ***Elective Activities***

Near the close of the spring semester of the Fourth Class year, a cadet may choose to receive instruction in fencing, handball, squash, diving, life saving, or some other elective. Special reconditioning courses are given throughout the year for cadets who may in some way be incapacitated. Extracurricular physical education is available through cadet club activities in sports such as judo and lacrosse.

## **DEPARTMENT OF INTERCOLLEGIATE ATHLETICS**

*Assistant Director for Intercollegiate Athletics:* Mr. R. C. James

The Intercollegiate Athletic Program provides opportunity for a large number of cadets to participate in a wide range of sports under skilled leadership. On a voluntary basis, half of the cadets at the Academy normally participate in intercollegiate athletics each year.

A total of 15 intercollegiate sports are available to the cadets:

Fall — football, cross-country, soccer

Winter — basketball, fencing, gymnastics, pistol, rifle, swimming, skiing, wrestling

Spring — baseball, golf, tennis, track

The Academy's varsity teams are known as the Falcons. During the 1961-62 season the Falcons will compete with leading colleges and universities from all parts of the nation, meeting strong intersectional opposition in all sports. The 1961 football schedule is as follows:

#### *Home Games*

23 September — UCLA  
30 September — Kansas State  
21 October — Maryland  
4 November — Colorado State  
2 December — Colorado

#### *Away Games*

7 October — SMU  
14 October — Cincinnati  
28 October — New Mexico  
11 November — California  
18 November — Baylor

All Air Force Academy home games during 1961 will be played either at the University of Denver stadium or the University of Colorado stadium. Beginning with the 1962 season, the home games are scheduled to be played at the Air Force Academy stadium now under construction. The Air Force Academy Foundation, an organization of national civic leaders, has raised funds to construct the stadium. Generous donations were given by personnel within the Air Force as well as people from all over the country who are interested in the Academy and its athletic program.



# Cadet Life



## THE CADET WAY OF LIFE

The cadet way of life differentiates the Air Force Academy from a civilian college or university. It includes all the activities and influences which are encompassed in the four-year environment of the cadet. This way of life requires a rigid daily schedule and conformity to strict discipline and conduct. It involves a gradual progression through the class system from follower to leader, from virtually no privileges to minimum supervision, from responsibility to self only to broad responsibility in management of the Cadet Wing.

## BASIC CADET TRAINING

Immediately after coming to the Academy, a young man receives an indoctrination to the cadet way of life through a basic cadet training program which continues for seven and one-half weeks. The purpose of this program is to mold the various types of young men from every state and territory into thoroughly disciplined cadets. The program is led and instructed by the upperclass cadets. It consists of instruction in basic military subjects such as drill, manual of arms, weapons, customs and courtesies; indoctrination rides in jet and conventional aircraft; and strenuous physical conditioning. The summer is climaxed by a realistic survival exercise in the Rocky Mountains. With limited rations and gear, under difficult terrain, the cadets sustain themselves while finding their way back to the Academy through the Rampart Range.

The basic cadet training program keeps the cadets busy from reveille to taps (5:30 a. m. until 10:15 p. m.). This fast, disciplined pace is quite a transition for most cadets who have been accustomed to a relaxed life. All of this is part of the training to teach the cadet discipline and self-control. The pressures involved in this training test the ability of a cadet to perform effectively under stress which he may be subjected to later as an Air Force officer. If a young man is not capable of withstanding these pressures, the Academy wants to discover this as soon as possible.

Upon completion of basic cadet training, the word "basic" is dropped and the young men become full-fledged cadets admitted as members of the Air Force Cadet Wing. Although the extreme pressure is relaxed, the rest of the Fourth Class year is far from being easy.

For the most part the cadets are restricted to the Academy with only occasional off-base privileges. They live by a book of Fourth Class customs requiring them to double time in the cadet area, square corners when walking, and recite specific literature upon command by upperclassmen. In general, Fourth Class cadets must be models of military bearing.

## **SPECIAL PRIVILEGES**

Special privileges to leave the Academy campus are based on a gradual transition from the status of a new cadet to a second lieutenant. The new cadet is not permitted to leave the Academy at all until he completes the basic cadet training program. With the beginning of the academic year, the Fourth Class cadet is permitted to leave the Academy only on specific holidays, after certain varsity football games, for special cadet activities, and for occasional dining with close relatives or staff officers. He may escort dates to social functions at the Academy or entertain visitors on Saturday afternoons and evenings, Sunday afternoons, and evenings preceding holidays.

Privileges are progressively increased by class in recognition of added maturity and responsibility. By the time a cadet has completed three years at the Academy and has become a First Classman, he is relatively free during off-duty hours, just as he will be as a second lieutenant.

Cadets of the Second, Third and Fourth Classes are not authorized to own or maintain automobiles. This privilege may be granted, however, to First Classmen at a date determined by the Commandant.

## **VISITS TO CADETS**

Parents will not have an opportunity to visit their sons while they are basic cadets. After summer training is over, parents may visit on Saturday afternoons and evenings, Sunday afternoons, and evenings preceding holidays. The same visitor's schedule applies to friends of cadets.

## **LEAVES OF ABSENCE**

Except in extreme emergencies, leaves are not granted during a cadet's first year at the Academy while he is developing a sense of discipline and esprit de corps. Although required to remain at the

Academy during the Christmas holidays, the Fourth Classman is relieved from duty and study. He may enjoy all the privileges of an upperclassman during the holidays and entertain visitors at the cadet social center.

During his Third Class summer, a cadet receives his first leave of approximately four weeks. He receives two to four weeks of leave during his Second and First Class summers. All upperclass cadets are authorized to take leave for approximately two weeks during the Christmas holidays.

Emergency leave may be granted to a cadet whose emergency involves a member of his immediate family. Other requests for special leave are considered on an individual basis.

## **CADET DORMITORY**

All cadets are housed in Vandenberg Hall, the cadet dormitory, located in the academic area of the Academy. In addition to the cadet rooms, the dormitory contains the cadet store, class lounges, and cadet activities rooms.

Two cadets share a room designed for comfort in a quiet atmosphere. Each cadet has a single bed, desk, lamp, chair, closet, wall bookcase, and chest of drawers. Mahogany is the furnishing pattern for the rooms. Each room has a picture window affording an excellent view of the cadet area and scenery surrounding the Academy. All cadets are required to meet rigid standards of cleanliness and neatness in the arrangement of clothing and equipment in their rooms.

## **DINING HALL**

The cadets eat all their meals in Mitchell Hall, located on the south side of a quadrangle which lies in the center of the main Academy buildings. The cadet dining hall, enclosed in glass on three sides, is large enough to seat the entire Cadet Wing at one time (approximately 2,500 cadets at maximum strength).

Cadets march to the dining hall in formation. They assemble by squadron on the battle area in front of the cadet dormitory. The Air Force Academy Band plays for the noon formation, which visitors are permitted to watch from the Court of Honor behind Harmon Hall, the administration building.



Visitors are not allowed in Mitchell Hall unless they are on an organized tour. Academy faculty and staff officers may invite male guests to eat at Mitchell Hall, but no female guests are permitted.

The cadet dining hall has become well known among the cadets for its excellent meals. The food is served family style, ten cadets to a table, and second helpings are always available.

## THE CADET'S DAY

During the fall and spring semesters a cadet's normal week day begins at reveille at 5:55 a. m. First he prepares his portion of the two-man room for morning inspection and then has breakfast from 6:35 to 7:00. He attends classes or studies from 7:30 to 11:45. At 12 o'clock he marches to the dining hall for lunch. After lunch he attends classes or studies from 1:10 to 3:15.

Unless he is participating in intercollegiate athletics, he practices or plays on a squadron intramural team two afternoons a week from 3:45 to 5:00. The other three afternoons during the week he spends in drill, command training, study, or cadet extracurricular activities. He may volunteer for extra academic instruction from 5:10 to 6:05 each afternoon during the week.

Dinner is from 6:30 to 7:00. At 7:15 the cadet must be in his room for study until taps at 10:15. Visits to the Library are authorized during study time. Unless the cadet is permitted to have late lights, he must be in bed with lights out at taps.

First Classmen on the Superintendent's Merit List have more freedom in their evening schedule. They are not required to maintain a strict study schedule and may have liberal late-light privileges.

A regular part of the weekly schedule is a Cadet Wing Parade on Saturday mornings at 11:30. The colorful marching performance is conducted on the parade grounds in a valley just east of the academic area. Visitors are welcome to attend the parades. A parking area and bleachers are available for visitors.

Following the parade the cadet is free from duty. On Saturday afternoons and evenings and Sunday afternoons, he may visit Arnold Hall, the cadet social center, and entertain guests there. At certain times upperclass cadets may receive special privileges to leave the Academy on weekends. The frequency of these privileges depends upon the prescribed number for the cadet's class.

## **PAY AND ALLOWANCES**

An Air Force cadet receives his education at government expense. In addition to an allowance for food, he receives \$111.15 per month which is credited to his account to pay for academic supplies, clothing, and personal expenses. Quarters and medical care are provided. With proper economy during his four years at the Academy, he will save enough to purchase the uniforms he will need as an officer upon graduation. A cadet's pay and allowances are considered sufficient for him to be self-supporting. However, he should not be indebted when entering the Academy, because his pay is not sufficient to cover any significant obligations contracted prior to entrance.

## **INSURANCE**

Government-sponsored insurance is not provided for cadets. A special commercial insurance plan is available to all cadets on a voluntary basis. The plan offered is \$10,000 term insurance and \$10,000 accidental death, dismemberment, loss of sight, and disability benefits. The total \$20,000 of insurance is available for \$3.50 per month. This amount is set aside in the Cadet Budget from the cadet's monthly pay. The policy is free of conditions or restrictions as to occupation, residence, travel or military service. The policy is convertible to a permanent plan of insurance at the end of the term period or upon graduation or separation from the Academy. This plan does not prevent a cadet from purchasing insurance from any other company he may select.

## **CADET UNIFORMS**

Distinctive cadet uniforms are issued to cadets during the fall of their Fourth Class year. The main uniform in the wardrobe is the blue winter dress, worn during the academic year to classes, meals, athletic events, and on official trips. The two parade dress uniforms (blue jacket and trousers for winter and blue jacket and white trousers for summer) are worn to parades and ceremonies. The blue evening dress uniform is worn to social functions the year around.

Cadets of the upper three classes are authorized to wear civilian clothing departing for, on, and returning from leave. Cadets of the First and Second Classes are authorized to wear civilian clothes off base when off duty, or at the home of a commissioned officer when

specified by the host. Cadets will not have an occasion to wear civilian clothing during their Fourth Class year.

## THE AIR FORCE CADET WING

Life in the Air Force Cadet Wing provides an opportunity for personal development of leadership competence and recognition of outstanding performance. The permanent organization of the Wing consists of a headquarters with a commander and his staff, 4 group staffs, and 24 squadrons, each squadron consisting of approximately 110 cadets.

Each squadron and group is supervised by a commissioned officer, designated as the Air Officer Commanding. He is individually selected to represent to the cadet the highest standards of professional competence, experience, integrity, leadership, and career motivation.

Upperclass cadets are appointed to positions of responsibility within the Cadet Wing to perform administrative duties and to assist with the military training and discipline of new cadets. Cadet officers and senior noncommissioned officers are chosen from the First and Second Classes only. The basis for selection is the cadet's leadership ability, determined in part by the Cadet Effectiveness Rating System which requires each cadet to rate the classmates in his squadron and classes junior to him.

The senior officer within the Cadet Wing is the Wing Commander, ranked as a cadet colonel. Other important First Class ranks are Group Commander, a cadet lieutenant colonel; Squadron Commander, a cadet lieutenant colonel; and Flight Commander, a cadet captain. Second Classmen hold grades of master and technical sergeants. Rank is indicated on the shoulder boards of the cadet uniform.

## THE CADET WING MASCOT

In the fall of 1955, members of the Class of 1959 selected the falcon as the mascot of the Cadet Wing. The falcon was chosen because its strength, alertness, aggressiveness, and poise in flight are symbolic of the mission of the United States Air Force. The falcon was named "Mach I," the term indicating the speed of sound.

There are several falcons at the Academy housed in the mews north of the academic area. The falcons are trained and cared for by

the Cadet Wing Falconers. These cadets volunteer their free time to practice the ancient sport of falconry, which involves training the falcons to fly in pursuit of a lure. The Cadet Falconers conduct demonstrations of the falcons' flying ability at half-time activities at football games and other sports events.

## THE HONOR CODE

The Honor Code is one of the most important features of cadet life. The Code was adopted by the Class of 1959 and has since been administered through elected Honor Representatives of the Cadet Wing. The Code embodies these principles: "We will not lie, cheat or steal, nor tolerate among us those who do."

The cadets realize that the Code is a bond between themselves and the entire military heritage. An adherence to the principles of personal integrity has traditionally characterized the professional officer. Every officer must follow this concept of honor if he is to perform his duties and carry out his responsibilities properly. Failure to do so would make it impossible to maintain the respect, confidence, and wholehearted cooperation of any command.

It is through this sense of trust that professors leave the classrooms while tests are being administered at the Academy. Both in and out of the classroom, a cadet practices the virtues of personal integrity, mutual trust, and loyalty through allegiance to the Honor Code.

## RELIGION

In preparing cadets for future leadership, the Air Force Academy stresses the development of religious and moral values. A military leader is expected to uphold those values among the men within his command.

A well-balanced religious program for adherents of the three major faiths — Protestant, Catholic and Jewish — enables cadets to develop their potential for religious leadership and at the same time to worship in the faith of their choice.

Upon arriving at the Academy, each cadet determines according to his major faith the specific chapel flight of his choice. Attendance at Sunday or Sabbath services of the faith selected is required of all cadets, except First Classmen who have the option of church attend-



ance. Protestant cadets of the Second and Third Classes may attend churches of their respective denominations in Colorado Springs in lieu of the Protestant Cadet Chapel.

There are other religious activities available to cadets who wish to participate. These include daily worship, special denominational services, choir participation, and religious instruction classes. In addition, a number of cadets have volunteered to teach Sunday School classes for children of Academy personnel.

Religious services are conducted by the Protestant, Catholic, and Jewish Chaplains. Besides their organized religious activities, the Chaplains are available to the cadets at any time for personal conferences or counseling. Many of the cadets make personal adjustments and solve problems through private discussions with their Chaplain.

The center of religious activities for the Cadet Wing will be the Cadet Chapel, which is now under construction within the academic area of the Academy. The Chapel has been designed to provide an enclosure for all three faiths and to impart a distinct character to each church located within the structure. The modern Chapel will feature 17 towering aluminum spires, designed as a monument to tomorrow's Air Force leaders.

## RECREATION

Recreational activities provide the cadets with diversion from their intensive schedule of classes and study. Arnold Hall is the cadet social center where most of the week-end activities are held. The social center is divided into three main areas: the theater, recreational rooms, and the reception room and ballroom.

The 3,000 seat theater is one of the finest auditoriums in the nation. Movies are held there on Saturday nights and Sunday afternoons for all cadets who desire to attend. The theater is also used for concerts, plays, and other special events.

The recreation area has a game room, card room, television room, an eight-lane bowling alley, and snack bar which may be used by cadets and their guests.

The reception room and ballroom is one large area where the cadets entertain guests, hold formal and informal dances and other social functions. This spacious area is enclosed with picture windows,

providing a view of the northern portion of the Academy site and the landmark "Cathedral Rock." Outside is a patio used during the summer months. Located here is a white marble statue of the mythological winged horse "Pegasus," given to the Air Force Academy by the Italian Government.

Social functions are held in Arnold Hall on Saturday nights and evenings preceding holidays. The Cadet Wing Hostess supervises all of the social functions and assists with arrangements for cadet outings at the Academy recreation area, called Farish Memorial. Here in a mountainous setting, cadets may enjoy fishing, horseback riding, boating, barbecues, picnics, and winter sports.

The Cadet Wing Hostess supervises the teaching of proper social customs and courtesies to Fourth Class cadets. This includes dining etiquette, social calls, introductions, grooming and conduct in public, and other social graces. Also, ten hours of professional dancing instructions are given to each Fourth Class cadet.

## CADET ACTIVITIES

Extracurricular activities are available to the cadets to further their hobbies or specific interests. It has been found that participation in these activities helps to develop leadership abilities. The cadets may form their own clubs and other activities, provided there is sufficient interest, and may join the organizations of their choice. Major cadet activities are as follows:

### *Representative Activities*

*Class Ring Committee* — Representatives of the Second Class select the ring crest and assist the class in selection and purchase of the class ring. The ring is awarded during June Week of the Second Class year.

*Wing Entertainment Committee* — Representatives from each squadron work in conjunction with the Cadet Activities Officer to provide entertainment for the Cadet Wing.

*Wing Dance Committee* — Representatives from each squadron plan dances for their class and the Cadet Wing.

*Catholic and Protestant Religious Councils* — Representatives from

each class assist in planning religious activities and represent the Academy at intercollegiate religious conferences.

*Rally Committee* — Representatives from each squadron plan pep rallies and halftime events at football games and other competitive sports.

### ***Academic and Professional Activities***

*Cadet Forensic Association* — Provides cadets with an opportunity to participate in forensic activities including debating, extemporaneous speech, oratory, discussion, and interpretive reading. Members of the Association represent the Academy in intercollegiate speech competition.

*Cadet Forum* — Provides a forum for cadet and guest speaker discussion of public military affairs and for participation in intercollegiate student conferences.

*Cadet Engineering Society* — Provides the means to engage in extra-curricular engineering projects and activities.

*Cadet Chorale* — Provides for participation in group singing. The Chorale appears before the Cadet Wing and the public in approved instances.

*Professional Studies Group* — Provides an opportunity to learn more about airpower and airmanship subjects. The Studies Group hears lectures by military officials, conducts a books and periodicals review panel, supervises the use of squadron airpower rooms, and arranges a limited number of field trips to military installations.

### ***Publication Activities***

*Contrails Staff* — Responsible for publication of the "Contrails" handbook prior to June of each year. The handbook serves as a record for the traditions and customs of the Cadet Wing as well as an orientation guide to the military service for each new class.

*Polaris Staff* — Responsible for publication of the yearbook "Polaris" prior to graduation each year. The yearbook presents a pictorial history of the activities of the Cadet Wing and the Air Force Academy during the year.

*Talon Staff*—Responsible for publication of the monthly cadet magazine "The Talon."

*Dodo Staff*—Responsible for writing an informal cadet paper called "The Dodo."

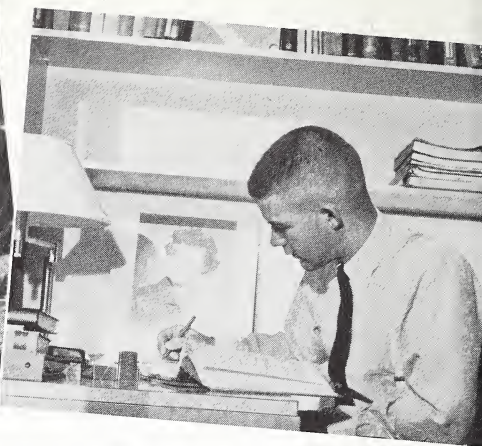
### ***Hobby Clubs***

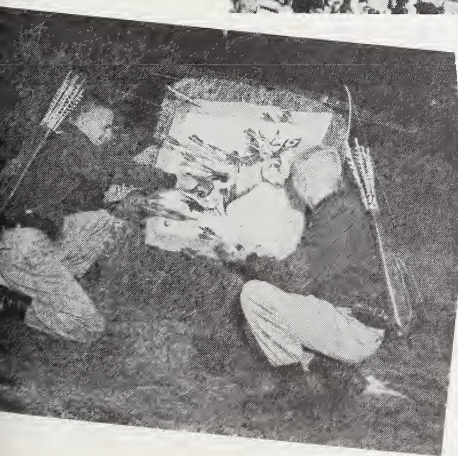
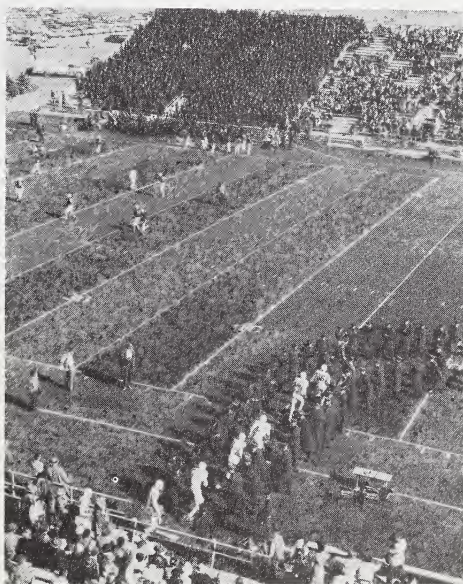
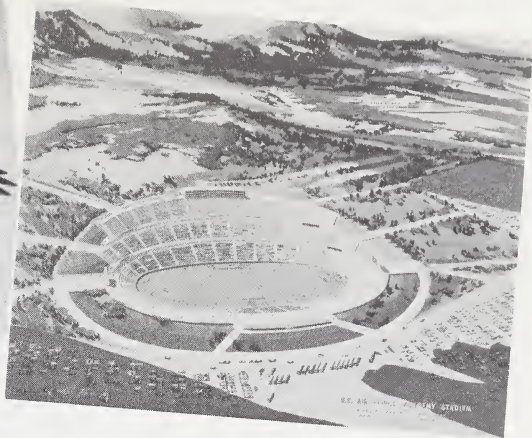
The following clubs provide facilities and activities for the cadets in various hobbies:

Bowman Club	Hockey Club	Judo Club
Bridge Club	Lacrosse Club	Saddle Club
Falcon Handlers	Chemistry Club	Water Polo Club
Bowling Club	Aquatic Club	Model Engineering Club
Chess Club	Musical Group	Foreign Language Club
Fishing Club	Radio Club	Mathematics Club
Geography Club	Ski Club	Photography Club
	Gun Club	











# Career Information



## OFFICER RANK

A cadet who has maintained the required grades will be graduated from the Academy with a commission as a second lieutenant in the Regular component of the United States Air Force. A limited number of graduates in each class may request assignment to other branches of the armed services.

## FLYING TRAINING

An Academy graduate who is physically qualified may volunteer for pilot or navigator training. After graduation leave he will be sent to an Air Training Command base and will spend about a year earning the rating of pilot or navigator.

## CAREER ASSIGNMENTS

An Academy graduate who completes pilot training will likely receive his first assignment in an operational unit as an air crew member in fighter, bomber or troop carrier aircraft. A graduate who does not qualify for any type of flying duty may be sent to a profes-

sional technical school. For example, he may specialize in guided missiles and receive an assignment in missile operation or research and development.

Further education at an armed forces graduate school or at a civilian college or university may be one of the early assignments of an Academy graduate. He may concentrate his graduate work in the sciences, social sciences or humanities and later receive an assignment based on his specialty.

As the Academy graduate progresses in his career, he will rotate between educational assignments, operational duties, and staff positions — both in the United States and overseas. With advances in rank his responsibilities will increase proportionately, and opportunities will be ever-present for him to evolve to greater command responsibility.

## **CAREER BENEFITS**

The Academy graduate will obtain substantial periodic pay increases and accrue promotions on the basis of efficiency and seniority through successive ranks. Besides his base pay he will receive flight pay (if on flying duty), tax free subsistence and quarters allowances, medical care for himself and dependents, payment of transportation costs, dislocation adjustments, and retirement pay. Some of the additional benefits which will be available to him are base exchange and commissary privileges, in-service housing loans, and educational opportunities. Monthly compensation is granted to dependents of deceased Air Force personnel who die in the line of duty while in the service.

## **ADVANCED EDUCATION**

The Air Force encourages its officers to apply for study in civilian colleges or universities. An officer is accepted for an educational assignment, based on his qualifications and the needs of the Air Force in his chosen field of study. It is anticipated that a substantial number of Academy graduates will have the opportunity to obtain advanced degrees. The Academy's four-year curriculum will qualify a graduate to study for a master's degree either in physical sciences, social sciences or humanities. All Academy graduates may expect to be assigned during their careers to one or more of the armed forces schools for advanced professional studies.



# Appendix

## CADET AWARDS

The following individual merit awards were presented to outstanding cadets of the 1960 graduating class during June Week at the Air Force Academy:

*The Lieutenant Generals Millard F. and Hubert R. Harmon Award*

Sponsored by the Daedalian Foundation

To the outstanding cadet in Graduation Order of Merit

*Alex D. Zimmerman*

*The General of the Air Force Henry H. Arnold Award*

Sponsored by the Aviator's Post 743, American Legion, New York, N. Y.

To the Cadet Wing Commander

*Anthony J. Burshnick*

*The General Muir S. Fairchild Award*

Sponsored by the American Legion

To the outstanding cadet in Academic Achievement

*David B. Luce*

*The General Hoyt S. Vandenberg Award*

Sponsored by Charles P. McCormick, Baltimore, Md.

To the outstanding cadet in Airmanship Studies

*David B. Luce*

*The Wright Brothers Award*

Sponsored by the Pennsylvania Society, Sons of the Revolution

To the outstanding cadet in Applied Sciences

*David B. Luce*

*The Brigadier General William Mitchell Award*

Sponsored by the Civil Air Patrol

To the outstanding cadet in Military Studies

*David B. Luce*

*The Amelia Earhart Award*

Sponsored by the National Woman's Relief Corps, Auxiliary to  
the Grand Army of the Republic

To the outstanding cadet in Social Sciences

*Russell R. MacDonald, Jr.*

*The Brigadier General Paul T. Cullen Award*

Sponsored by the Institute of Navigation

To the outstanding cadet in Navigation

*Alex D. Zimmerman*

*The Lieutenant General Barton K. Yount Award*

Sponsored by the National Society, Sons of the American  
Revolution

To the outstanding cadet in Humanities

*Phillip A. Cooke*

*The Captain Dean G. Crowell Award*

Sponsored by the Jewish War Veterans of the USA

To the outstanding cadet in Physical Education

*Richard B. Shepard*

*The Lieutenant General Claire L. Chennault Award*

Sponsored by the United Daughters of the Confederacy

To the outstanding cadet in Basic Sciences

*Alex D. Zimmerman*

*The Major General Oscar Westover Award*

Sponsored by the Ladies Auxiliary, Veterans of Foreign Wars

For outstanding Cadet Effectiveness

*Jerry L. Caskey*

*The First Lieutenant Beverly S. Parrish, Jr., Award*

Sponsored by the Air Force Cadet Wing

To the chairman of the Cadet Honor Committee

*Donald D. Stevens*

*The Colonel Carl F. Greene Award*

Sponsored by Col. Archie Higdon, Professor and Head of  
Departments of Mechanics and Physics  
To the outstanding cadet in Mechanics  
*David B. Luce*

*The Lieutenant General Frank M. Andrews Award*

Sponsored by Mrs. Chester E. Smedley, Denver, Colo.  
To the outstanding cadet in History  
*Russell R. MacDonald, Jr.*

*The Captain Richard T. Carvolth III Award*

Sponsored by the Daughters of Founders and Patriots of America  
To the outstanding cadet in Political Science  
*Edwin L. Whitman*

*The Dr. John Von Neumann Award*

Sponsored by the family friends of Dr. Von Neumann  
To the outstanding cadet in Astronautics  
*Alex D. Zimmerman*

*The Major General George O. Squier Award*

Sponsored by the Military Order of Foreign Wars  
To the outstanding cadet in Physics  
*John M. Loh*

*The Floyd Bennett Award*

Sponsored by the Army-Navy Union  
For the most improvement in General Order of Merit  
*John R. Jansen*

*The Colonel Paul W. Brosman Award*

Sponsored by the Colleagues of the U. S. Court of Military  
Appeals  
To the outstanding cadet in Law  
*Frederick T. Walker*

*The Brigadier General Frederick W. Castle Award*

Sponsored by the National Society, Colonial Daughters of the  
17th Century

To the outstanding cadet in National Defense Policy

*Edwin L. Whitman*

*The Lieutenant Colonel Thomas Hitchcock Award*

Sponsored by Hugh Shockley, Denver, Colo.

To the outstanding cadet in Economics

*David B. Luce*

*The Captain Earl N. Findley Award*

Sponsored by the Colorado Springs Chamber of Commerce

To the editor of the Talon, the cadet magazine

*Fuller D. Atkinson*

*The Brigadier General A. Robert Ginsburgh Award*

Sponsored by the Daughters of the Union Veterans of the Civil  
War

To the editor of the Polaris, the cadet yearbook

*Norman C. Alexander*

*The Dr. Robert H. Goddard Award*

Sponsored by the American Ordnance Association

To the outstanding cadet in Mathematics

*Donald D. Stevens*

*The Captain James Hall and Lieutenant Charles Nordhoff Award*

Sponsored by the Veterans of Foreign Wars

To the outstanding cadet in English

*James F. Glaza*

*The Professor Samuel Pierpont Langley Award*

Sponsored by the National Society, Daughters of the American  
Revolution

To the outstanding cadet in Aerodynamics

*Wilfred L. Goodson*



*The Major G. Raoul Lufbery Award*

Sponsored by the Military Order of World Wars  
To the outstanding cadet in Foreign Languages

*Martin E. Richert*

*The Major General James E. Fechet Award*

Sponsored by the National Society, Children of the American  
Revolution

To the outstanding cadet in Intercollegiate Speech Competition

*Frederick T. Walker*

*The Major General Herbert A. Dargue Award*

Sponsored by the Armed Forces Communications and Electronics  
Association

To the outstanding cadet in Electrical Engineering

*David B. Luce*

*The Captain Edward E. Barrow Award*

Sponsored by the National Society, Daughters of the American  
Colonists

To the outstanding cadet in Chemistry

*Alex D. Zimmerman*

*The Colonel Homer Kellems Award*

Sponsored by the Reserve Officers Association

To the outstanding cadet in Thermodynamics

*Alex D. Zimmerman*

*The Harold E. Talbott Award*

Sponsored by Grover Loening, New York, N. Y.

To the outstanding cadet in Leadership Studies

*George H. Hines*

*The Dr. John Oliver LaGorce Award*

Sponsored by the National Geographic Society

To the outstanding cadet in Geography

*Edwin L. Whitman*

*The Autrey Brothers Award*

Sponsored by the Autrey Brothers of Denver, Colo.

To the basketball player with the Best Free Throw Record

*James P. Ulm*

*Air Force Times Award*

Sponsored by the Air Force Times

To the Outstanding Football Lineman of 1959

*Samuel A. Hardage, Jr.*

*Air Force Times Award*

Sponsored by the Air Force Times

To the Outstanding Football Back of 1959

*Michael J. Quinlan*

*N. Jay Boots Award*

Sponsored by Mr. N. Jay Boots, a friend of the Air Force

To the Most Outstanding Athlete

*John D. Kuenzel*

*Tate Brothers Award*

Sponsored by Mr. Dan Tate of Sports Illustrated

For Outstanding Leadership as an Athlete

*Derry A. Adamson*

*Air Force Academy Athletic Association Award*

Sponsored by the Air Force Academy Athletic Association

For outstanding contribution to Intercollegiate Athletics

*Donald L. Wolfswinkel*

## U. S. AIR FORCE ACADEMY AND AIRCREW EXAMINING CENTERS

### **Alabama**

Maxwell AFB, Montgomery

### **Alaska**

Elmendorf AFB, Anchorage

### **Arizona**

Davis-Monthan AFB, Tucson

### **California**

March AFB, Riverside

Travis AFB, Fairchild

### **Colorado**

Lowry AFB, Denver

### **District of Columbia**

Bolling AFB, Washington

### **Florida**

MacDill AFB, Tampa

### **Georgia**

Hunter AFB, Savannah

### **Hawaii**

Hickam AFB, Honolulu

### **Illinois**

Chanute AFB, Rantoul

Scott AFB, Belleville

### **Louisiana**

Barksdale AFB, Shreveport

### **Massachusetts**

Otis AFB, Falmouth

Westover AFB, Chicopee Falls

### **New York**

Griffis AFB, Rome

### **Ohio**

Lockbourne AFB, Columbus

Wright-Patterson AFB, Dayton

### **Pennsylvania**

Olmsted AFB, Middletown

### **South Carolina**

Shaw AFB, Sumter

### **South Dakota**

Ellsworth AFB, Rapid City

### **Tennessee**

Sewart AFB, Smyrna

### **Texas**

James Connally AFB, Waco

Randolph AFB, San Antonio

Sheppard AFB, Wichita Falls

### **Utah**

Hill AFB, Ogden

### **Virginia**

Langley AFB, Hampton

### **Washington**

McChord AFB, Tacoma

### **Canal Zone**

Albrook AFB, Balboa

### **Michigan**

Selfridge AFB, Mt. Clemens

### **Mississippi**

Keesler AFB, Biloxi

### **Montana**

Malmstrom AFB, Great Falls

### **Nebraska**

Offutt AFB, Omaha

### **New Jersey**

McGuire AFB, Wrightstown

### **New Mexico**

Walker AFB, Roswell

### **England**

7500th Air Base Group, Denham

### **Germany**

Wiesbaden AFB, Wiesbaden

### **Japan**

Tachikawa AFB, Tachikawa

### **Newfoundland**

Ernest Harmon AFB, Stephenville

### **Philippine Islands**

Clark AFB, Luzon

### **Puerto Rico**

Ramey AFB, Aguadilla

## PHYSICAL APTITUDE EXAMINATION: SPECIFIC REQUIREMENTS

The items to be included in this examination will normally be selected from those listed below. The standard of performance indicated for each item is considered as the minimum performance to be achieved by each candidate. However, the examination will be graded on the basis of the total score. Therefore, if a passing score is achieved on the whole examination, failure to achieve a passing score on any single test will not cause disqualification.

1. *Modified basketball throw . . . 48 feet*  
A throw for distance from a kneeling position using a regulation basketball.
2. *Broad jump for distance, standing . . . 6 feet 9 inches*
3. *Broad jump for distance, three in succession . . . 21½ feet*  
Standing start with 3 successive broad jumps
4. *Dipping on parallel bars . . . 3 times*  
Raising and lowering oneself on parallel bars by means of the arms. The body is lowered until upper arm passes the horizontal.
5. *Dodge run . . . 26 seconds*  
A run through a maze placed on the gymnasium floor.
6. *Hop, step, and jump . . . 21 feet*  
From a standing position take a hop, a step, and a jump to gain as great a distance as possible.
7. *Hurdle run . . . 40 seconds*  
A run through a maze of hurdles placed on the gymnasium floor.
8. *Medicine ball put . . . 32 feet*  
A 6-pound medicine ball is put, using the same movement as required for a shotput.
9. *Pullups . . . 3 times*  
Chinning oneself on a horizontal bar, grasping bar with palms away from face.
10. *Pushups . . . 20 times*  
Standard pushups, starting from the leaning rest position.



11. *Rope climb . . . 10½ feet*

Climb a regulation gymnasium rope as high as possible in 7 seconds, using hands and feet or hands alone, starting from a standing position.

12. *Shuttle run . . . 250 yards (52 seconds) 300 yards (65 seconds)*  
A shuttle run on a gymnasium floor between two turning blocks 25 yards apart.

13. *Vertical jump . . . 17 inches*

The difference between the height an individual can reach and the height he can jump and reach.

## **COMMON MEDICAL REASONS FOR DISQUALIFICATION OF AIR FORCE ACADEMY CANDIDATES**

Listed below are some of the physical disqualifying factors on the Air Force Academy Qualifying Medical Examination.

### ***Visual Disqualifications***

Visual acuity which is less than 20/100 in each eye correctable to 20/20 in each eye. Myopic refractive error exceeding -2.00 diopters in any one meridian or a hyperopic refractive error exceeding +3.00 dipoters in any one meridian. Markedly deficient color vision.

### ***Hearing Disqualifications***

Hearing which is not 15/15 bilaterally by whispered voice test or better. Existing perforations of the tympanic membrane.

### ***Heart and Vascular System Disqualifications***

Systolic blood pressure greater than 139 and diastolic blood pressure greater than 89. Heart rate of 100 or more after repeated examination in recumbent position. All murmurs, other than functional. (Arrhythmias will be carefully evaluated.)

### ***Height Disqualifications***

Under 64 inches and above 78 inches.

### ***Weight Disqualifications***

Evidence of gross under or over weight.

***Abdomen Disqualifications***

Hernia of any type until corrected.

***Lungs and Chest Disqualifications***

History of tuberculosis within preceding 5 years. (Asthma of any degree or history thereof since 12th birthday will be carefully evaluated.)

***Genito-Urinary Disqualifications***

Varicocele, if large or painful, until corrected.

***Extremities Disqualifications***

Un-united fractures and old joint fractures with evidence of arthritis. Pes planus with marked eversion and symptoms.

***Spine and Musculoskeletal Disqualifications***

Scoliosis of more than one inch. Old vertebral fractures.

***Skin Disqualifications***

Chronic skin diseases such as severe acne or eczema or unsightly congenital markings.

***Neurologic Evaluations***

Head injury resulting in prolonged unconsciousness and neurological diseases of any kind will be carefully evaluated.

***Psychiatric Evaluations***

Emotional instability and psychiatric diseases will be carefully evaluated.

***Nasal Disqualifications***

Any congenital or acquired lesion which interferes with the functions of the nasopharynx or eustachian tubes.

***Dental Disqualifications***

Less than 8 serviceable, vital permanent teeth in each of the upper and lower arches, exclusive of third molars, so positioned as to retain and adequately stabilize bridges or partial dentures. Dental caries are remediable defects, but are disqualifying until corrected. Severe malocclusion of the teeth or malrelation of the jaws sufficient to adversely affect the individual's health or appearance.

LETTER FORMAT FOR  
REQUESTING A CONGRESSIONAL NOMINATION

Date

Honorable.....  
House of Representatives  
Washington 25, D. C.

OR

Honorable.....  
United States Senate  
Washington 25, D. C.

Dear Mr.....:

Dear Senator.....:

It is my desire to attend the Air Force Academy and to make the United States Air Force my career. I respectfully request that I be considered as one of your nominees for the class that enters the Academy in June 1962.

The following personal data is furnished for your information:

Name:

Address:

Parents' Name:

Date of Birth:

High School Attended:

Date of High School Graduation:

Approximate Grade Average:

I have been active in high school extracurricular activities shown on the attached list.

I shall greatly appreciate your consideration of my request for a nomination to the Air Force Academy.

Sincerely,

Signature

## LETTER FORMAT FOR REQUESTING A PRESIDENTIAL NOMINATION

Date

Director of Admissions  
USAF Academy, Colorado

Dear Sir:

I request a nomination under the Presidential category and submit the following data:

Name: *(Give name as shown on birth certificate. If different from birth certificate, attach a copy of court order, if applicable.)*

Address: *(Give temporary, mailing and/or permanent address.)*

Date and Place of Birth: *(Spell out month.)*

If Member of Military: *(List rank, serial number, component, branch of service, and military address.)*

If Previous Candidate: *(List year and candidate number.)*

### ***Information on Father***

Name, Rank, Serial Number, Component and Branch of Service:

Organizational Address:

Retired or Deceased: *(Give date and attach copy of retirement orders or casualty report.)*

Reserve Officer: *(Attach Statement of Service prepared by personnel officer emphasizing Regular or Reserve status for all periods of service.)*

Enlisted Personnel: *(Attach statement prepared by personnel officer listing date of enlistment, date of enlistment expiration, component and branch of service.)*

Sincerely,

Signature



## LETTER FORMAT FOR REQUESTING A SON OF DECEASED VETERAN NOMINATION

Date

Director of Admissions  
USAF Academy, Colorado

Dear Sir:

I request a nomination under the Sons of Deceased Veterans category and submit the following data:

Name: *(Give name as shown on birth certificate. If different from birth certificate, attach a copy of court order, if applicable.)*

Address: *(Give temporary, mailing and/or permanent address.)*

Date and Place of Birth: *(Spell out month.)*

If Member of Military: *(List rank, serial number, component, branch of service, and military address.)*

If Previous Candidate: *(List year and candidate number.)*

### ***Information on Father***

Name, Rank, Serial Number, Regular or Reserve Component and Branch of Service:

Date and Place of Death:

Cause of Death:

Veterans Administration XC Claim Number:

Address of VA Office Where Case is Filed:

Sincerely,

Signature

*(Forwarding a copy of Death Certificate, preferably the Casualty Report, will expedite processing of your application.)*

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*Director of Cadet Wing Personnel*

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B.A., M.B.A., Syracuse University

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B.S., Creighton University  
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M.S., Springfield College

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B.S., United States Naval Academy

Capt. Thomas N. Bakke  
*Instructor in Physical Education; Assistant Football Coach*

B.S., United States Naval Academy

Thomas G. Berry  
*Assistant Football Coach*

B.S., M.S., University of Virginia

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B.S., University of Kansas

George A. Boley  
*Rifle Coach*

1st Lt. James N. Bowman  
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(USA)  
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B.S., United States Military Academy

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*Department of Physical Education;*  
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Capt. John Schwall

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Intercollegiate Athletics*

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*Catholic Chaplain*  
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Lt. Col. George J. Cameron  
*Protestant Chaplain*  
B.A., Albion College  
B.D., Northwestern University

Maj. Freddie W. Carlock  
*Protestant Chaplain*  
B.A., B.D., Texas Christian University

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B.A., University of Cincinnati  
B.H.L., Hebrew Union College

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Col. Lee M. Lightner  
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*Director of Hospital Services*  
B.S., Seton Hall College  
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Maj. Gordon P. Culver  
*Special Assistant to the  
Superintendent*

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*Registrar*

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M.A., University of Michigan

Ed.D., Harvard University

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University

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M.A., Columbia University

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B.A., University of Missouri

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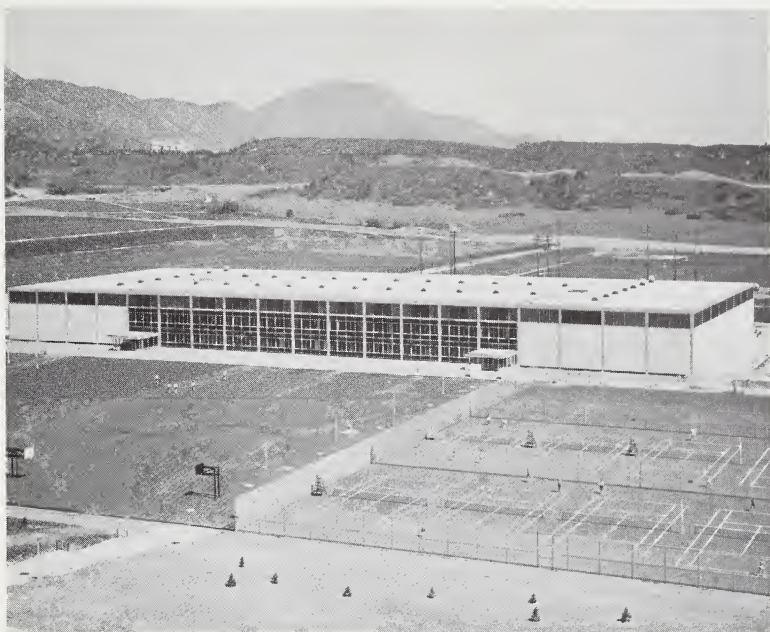
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B.S., M.S., North Texas State College

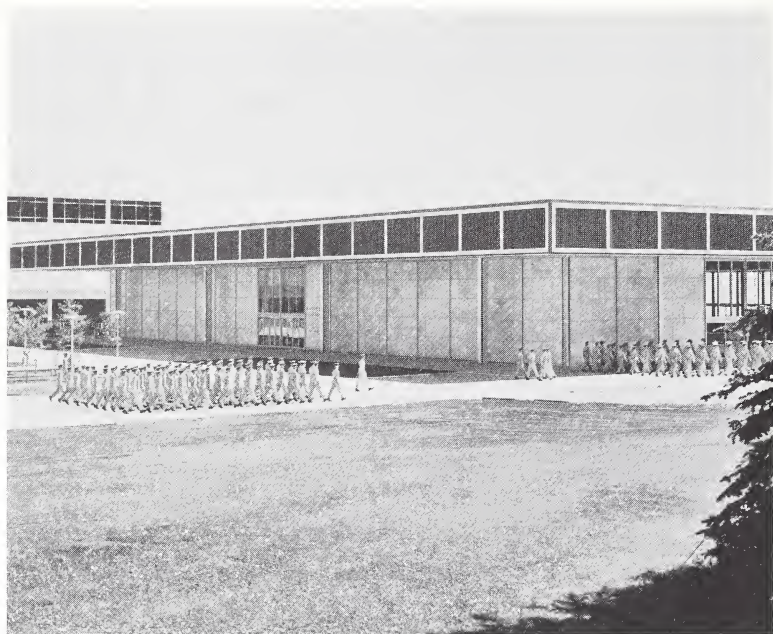


The Cadet Gymnasium



Arnold Hall, the cadet social center





Mitchell Hall, the cadet dining hall

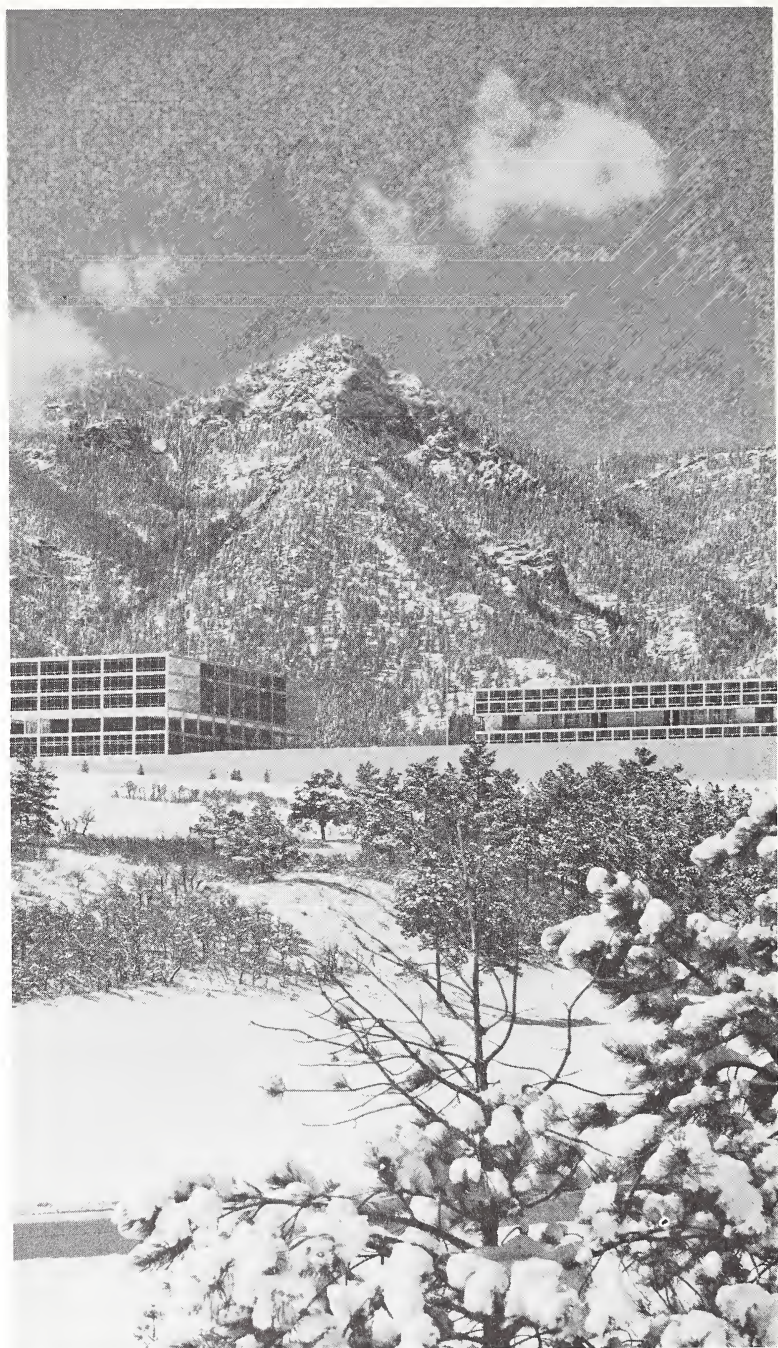


The Academy Hospital

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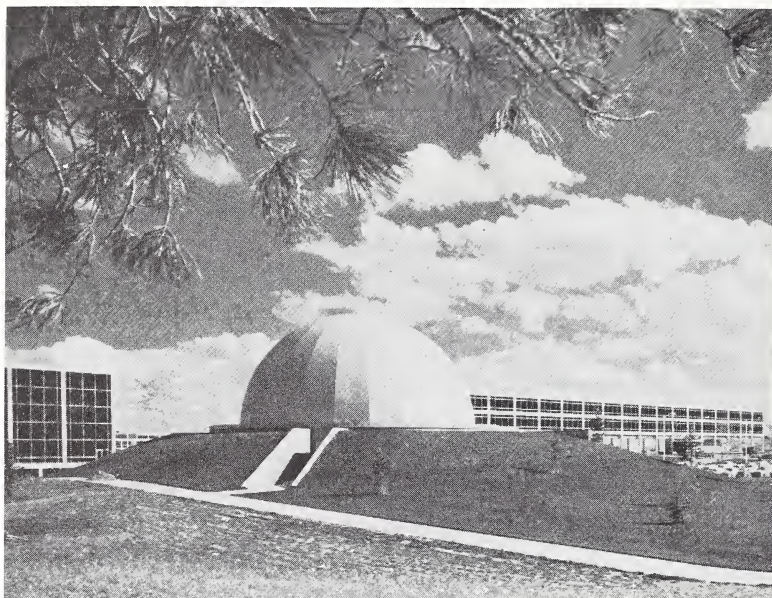


Farish Memorial, the Academy recreation area



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Arnold Hall (left), the Planetarium (center) and Harmon Hall,  
the Administration Building (right)

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Cadets appearing in the photo on the front cover are:  
Phil Lane (left) and Mike Quinlan (right), Class of 1961







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